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Clinical Medicine and Surgery

Medical Life

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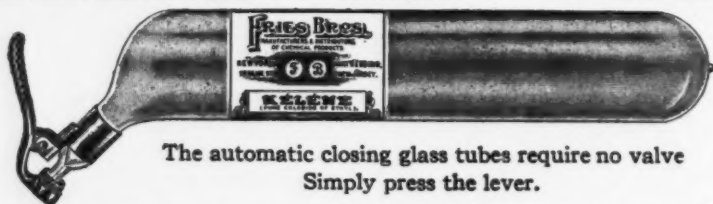
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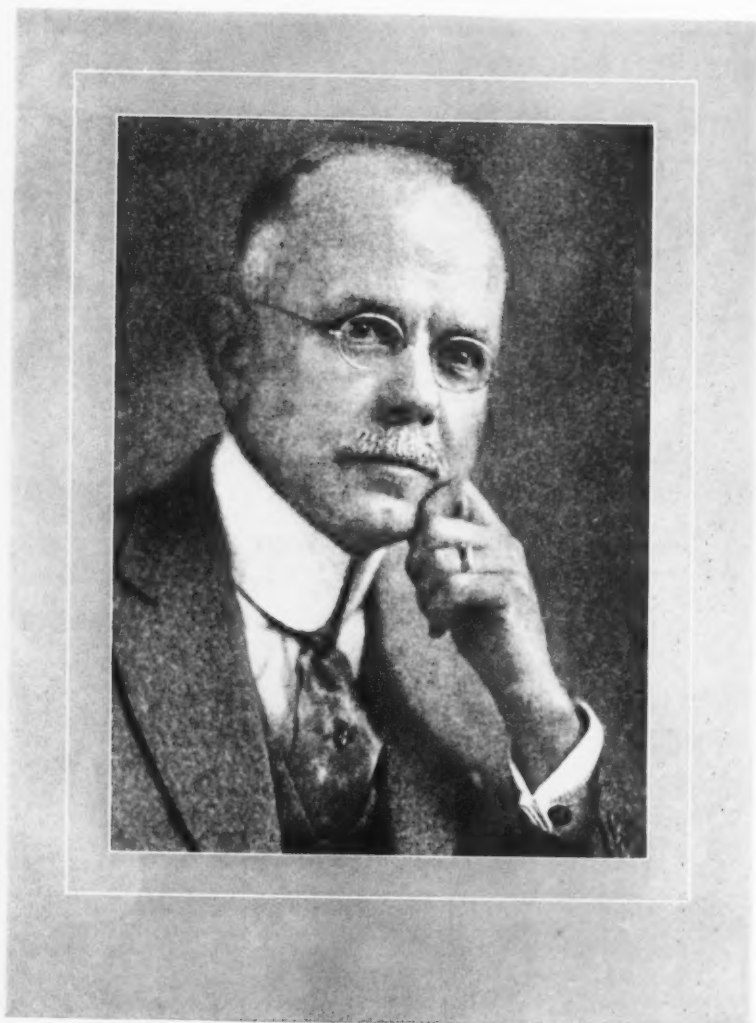
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WILLIAM GERRY MORAN, A.B., M.D., F.A.C.P.



CLINICAL MEDICINE AND SURGERY

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Dr. William Gerry Morgan

ON MAY, 2, 1868, in Newport, New Hampshire, a son was born to Webster and Mary (Strong) Morgan, and they named him William Gerry.

Young Morgan went to school, as other boys do, but he went more and longer. Webster Academy gave him the degree of B.Sc.; from Dartmouth College he received his Bachelor's degree in Arts; and in 1893 he emerged from the University of Pennsylvania as a Doctor of Medicine.

After doing some postgraduate work, he began to practice in Southport, Connecticut, in 1894, and remained there for five years, after which he moved to Washington, D. C., where his professional and social success was almost immediate.

In 1900, Dr. Morgan was appointed instructor in physical diagnosis in Georgetown University, and, four years later, was promoted to be professor of gastroenterology in that institution of learning, which position he has held ever since. The year of his promotion (1904) was that of his marriage to Miss Corinne B. Boyd and of the beginning of his service on the staff of Georgetown University Hospital, which also continues to the present time. Since 1920 he has served on the consulting staff of the Garfield Memorial Hospital.

During the War, Dr. Morgan was a Lieutenant in the Naval Reserve Corps and a member of Draft Advisory Board No. 3.

He is a member of a number of medical societies and other scientific groups and has been president of his State Medical Society, the American Society of Clinical Pathologists and the American Gastroenterological Association. At present he is a member of the board of regents and of the Executive Committee of the American College of Physicians.

Dr. Morgan has contributed fairly freely and always helpfully to the periodical literature of his profession.

The man who has now been called to the highest position in the gift of Organized Medicine is proud to call himself a "bed-side doctor" in which capacity his charming and cultured personality has been an important factor in his success, along with his high professional attainments. He is of medium height, cordial and friendly (he has a host of loyal friends), and he understands the viewpoint of the general practitioner more clearly than have many of the incumbents of his present high office.

There is every reason to believe that the program of the American Medical Association, under the presidency of Dr. Morgan,

will be intelligent and progressive, and it is to be hoped that some of the rather pressing problems of modern Medicine will be far nearer a sound solution when he lays down the gavel.

He who has friends in every place finds every place delicious.—Chinese Proverb.

THOUGHT HUNTING

PHYSIOLOGISTS find, when they experiment with the electric stimulation of nerves, that, after a time, the muscular contractions resulting from such stimuli become, gradually, less and less powerful until, finally, there is no response whatever. A graphic representation of these weakening reactions is known as the curve of fatigue.

This fatiguing process, extends, like most, if not all, activities in nature, far beyond the field where it is most readily and objectively demonstrated by the experimenters. In another field of nervous reactions, the ear may become so accustomed to loud and continuous noises that they no longer make an impression on the consciousness. This is a species of auditory fatigue.

These things are matters of common knowledge; but few persons ever stop to think that this same process carries over into the emotional and mental fields, as well as operating on the physical plane.

Most visitors in the Swiss Alps, or to our own stupendous Rocky Mountains, are overcome by the majestic beauty of the panoramas which unfold before them; but the people who live, the year round, in these towering wonderlands become so habituated to them that they seem commonplace.

Most persons who find themselves in a position of physical danger exhibit a series of symptoms resulting from the excitation of the endocrine glands, which is produced by the emotion, fear; but the soldier in battle and persons who are engaged in hazardous occupations in time of peace—structural steel workers, steeple-jacks, aviators

and the like—while mentally conscious of the risks they run, have had their emotional responses tired out, so that they do not show the clinical picture of fright, although they may be, in the colloquial phrase, "shaking in their boots."

This emotional fatigue and the resulting apparent callousness and stoicism are Nature's coat of armor for those who, for some reason, must earn their bread in the pursuit of dangerous callings. Without this peculiar form of anesthesia, such persons could not remain in these vocations. If the emotional shock and stress continued undiminished, they would be prostrated in a few days.

But, while this deadening of the faculties of perception and appreciation may, under certain circumstances, be desirable or even necessary, it does not confine itself to the salutary spheres, but spreads its leaden mantle over territories of the psychic life which should be bathed in the sunshine of joy and enthusiasm, so that beauty and truth, viewed too closely and continuously, may cease to cause a brightening of the eye, a quickening of the pulse, or any uprush of spiritual exultation.

Those who suddenly discover that this vivid and multifarious earth is losing its lure and life is ceasing to be a zestful adventure, will find an antidote or a remedy in a homely and hand-hewn philosophy: Not the highbrow dialectics of the schoolmen and the self-proclaimed "intellectuals," but a sensible and reasonable consideration of the forces which underlie and determine daily contacts and conduct and all the affairs of living.

By no means everyone is interested in the involved, often incomprehensible and sometimes iconoclastic metaphysical hair splitting of a Nietzsche or a Croce; but, since "the object of philosophy is to put an end to pain," no man, woman or child is so wholly exempt from struggle and suffering as to be able to afford to miss the strength,

help and light which come from a penetrating and concentrated study of the "little things" of life and of the interlocking relationships between them and the rest of the cosmos.

The study of *how* things are done and phenomena take place (which is the mission of science) may become a monotonous and tiresome routine at times, even to eager scientists; but while the human mind is constituted as it now is, an inquiry into the *why* of things (which is the purpose of philosophy), if conducted in terms which are readily understandable, cannot fail to stir the imagination and intrigue the curiosity of all who have reached the true status of *men*, for we must remember that that short and meaningful expression comes from the Sanskrit word, *Manas*, which signifies "a thinker."

Even occupations and tasks which may appear drab, savorless and menial will, when touched by the magic wand of philosophy, develop unexpectedly stimulating possibilities; and phrases which, by frequent repetition without thought, have become trite and void of capacity to move us, will suddenly become endued with surprising vitality and power.

It will be worth the while of everyone who thinks at all to acquire the habit of spending a few minutes *each day* in quiet and serious pondering or meditation upon some specific act or job or word or idea, until the real inner essence of its purpose and meaning begins to become plain. After one successful adventure into the domain of individual philosophic speculation, the adventurer almost invariably becomes an addict, for the pursuit of thoughts into the lair where they hide is the most exciting sport in the world, because, among other reasons, it is a distinctively *human* form of activity, to be indulged in only by those who are truly and fully men, in the ancient sense, and we all enjoy doing *something*

which we feel sure is beyond the capacity of certain other people.

There is no fragment of the activities of the physical body, the emotions or the mind, which is so small and apparently valueless that it cannot serve as a basis for such speculation or may not harbor something of wholly unexpected worth and beauty, to be discovered when the hard, dull crust of familiarity is broken.

It is sad—and wholly unnecessary—to watch our friends, our relatives and ourselves growing old. And this distressing process, in its most uncomely aspects, need not take place, for it depends less upon the passing of a certain number of years than upon the waning of enthusiasm—the loss of the eager, questing attitude toward life and the world. This attitude can and should be retained, even into far-advanced years, by the regular practice of philosophic speculation.

Those who say that they have no time for such exercises *have no time to live*, for the mere continuance of a vegetative or animal existence is not living, in the human sense, and should not be so considered. Many walk among us who have been dead for years, or have never been alive at all.

Let us look at the affairs of every day with the keen and widely opened eye and the inquiring mind which characterize the philosopher. Let us become confirmed and inveterate *thought hunters*!

However mean your life is, meet it and live it; do not shun it and call it hard names. It is not so bad as you are.—Henry D. Thoreau.

MEDICAL PROBLEMS IN AVIATION

IF ANYONE doubts that this nation is rapidly becoming "air-minded," the impressive figures for commercial aviation for the last few years will give him a shock.

In 1926, airplanes were flown 4,318,000 miles in the United States; in 1928, 9,888,000 miles; and in 1929, up to July 1, the estimated mileage had reached 8,000,000.

In 1926, the number of passengers carried in airplanes for hire in the United States was 5,782; in 1928, 33,414; while 1929, up to July 1, shows an estimated air passenger traffic of 40,000.

These figures, and the conditions which underlie them and make them possible, have almost incalculable industrial and commercial connotations. But that is not all. They will make definite differences in the practice of medicine in a variety of ways.

The airplane seems destined to assume increasing importance as a means of transporting the physician and possibly the nurse to their patients, and seriously ill patients to hospitals.

But even that is not all. Some persons are so constituted, in one way or another, that high altitudes are dangerous to them. These people should not fly at all; but who, if not their family physicians, or perhaps some specialists, in certain cases, is to inform them whether or not a journey up under the arch of "that inverted bowl we call the sky" is likely to result in death or serious disablement?

As information regarding the possibilities of dangers in flying is given wider public dissemination, more and more men and women will be coming to physicians with the question, "Will it be safe for me to fly to New York or San Francisco or wherever?" And the doctors who are now taking steps to qualify themselves to answer that question with authority will have a decided advantage over their less farsighted confreres who are still thinking in terms of the nineteenth century.

In addition to these opportunities, there is the constantly widening field for the highly technical physical examination and oversight of the rapidly growing horde of commercial and private air pilots.

The United States Army has conclusively proved that by no means all men and women are physically and temperamentally qualified to fly a ship, and its fliers are rig-

idly examined, classified and supervised. If commercial and general aviation are to be the success which many expect to see in the rather near future, some comparable scheme will have to be worked out for civilians—and *physicians will have to do the work!*

It seems probable that aviation medicine, as a recognized specialty in practice, will be with us before the present generation of young medical graduates have survived their professional usefulness. It therefore behooves our medical colleges to be including instruction along these lines in their curriculums and, pending that time, forward-looking physicians will be seeking training which will qualify them to do this interesting and lucrative type of work. And the field will not be crowded for many years, because doctors, along with pedagogues and preachers, tend to be ultraconservative.

But, what a chance for the youngster with vision and ambition!

A single track mind is all right if you can elide-track a prejudice to let an idea come through.—"Phil,"

PHARMACY WEEK

THEY are having "days" and "weeks," nowadays, for all sorts of things, and some of the propaganda thus flung abroad is decidedly thin—not to say punk—but some of these special occasions seem really worth while.

Few laymen, and by no means all physicians, realize what a genuine service the scientific pharmacists are rendering to the public and to the medical profession, today. The drug store, with its lunch, notion, hardware, grocery and other counters has been joked about until many people forget that there are institutions that do nothing but fill prescriptions, and that even in the bustling toilet goods and jim-crack emporiums there is, hidden away on the balcony or behind a showcase, a man or group of men, busy all day in preparing the medicines prescribed by doctors.

The sincere pharmacist leaves no stone unturned to render a truly professional service to those who depend upon his accuracy and integrity.

So this year, for the fifth time, all the agencies connected with this profession, including the deans of the schools, editors of the journals and members of the state boards of pharmacy, in this and all other English-speaking countries—England, Canada, Australia, New Zealand, South Africa and Tasmania—will unite, during the week of October 13 to 19, in telling the world what is being done to make it a happier place, by the dispensers of drugs. And all this from a purely educational—not a commercial—standpoint.

If any people in the world should be in close cooperation it is the doctors, dentists and pharmacists, so all connected with the healing art should unite to make Pharmacy Week an occasion to be remembered.

Most people appreciate only that which costs them something.—Dr. Elmer N. Reed.

DOCTOR BAITING

MAKING slurring remarks about the medical profession appears to be a rather popular amusement just now; at least the lay magazines seem to think so, for they are publishing a considerable amount of material which does no credit to their judgment and even less to their sense of decent fairness.

Among the most notorious and blatant of the detractors is one, T. Swan Harding, who wields a wicked pen—à la H. L. Mencken—and who either has made no adequate preparation for the task upon which he enters with such gusto, or is extremely careless with facts, for the furtherance of his propaganda.

For Harding is a propagandist! He longs for State Medicine and, in preaching that cause he finds that ignorance or misrepresentation of the activities of physicians gives him a freer use of his vocabulary

of derogation than he would enjoy if he knew what he was talking about or were interested in presenting facts, rather than partisan ballyhoo.

His article, which appeared in the *Forum* for June, 1929, is a fair sample of the kind of sculch he is foisting upon the public, through the medium of the various periodicals which appear to consider that "smartness" consists chiefly of sarcastic remarks—not about individuals, as a rule, for that might prove unprofitable, but of classes of men, of ideas and ideals or of localities.

It would be a waste of time to enter into an argument with such a person, or with those who swallow his stuff, over such palpable errors of statement (to put it kindly) as that the average intelligence of physicians is lower than that in almost any other profession and that seventy-five percent of them or more are more or less pleasant ignoramuses who never do any reading or study, but spend hours every week in flirting with nurses, golfing, fishing, loafing and "whistling, snapping their fingers and smoking."

It would be equally fruitless to try to change the outlook of one who is so ill-informed as to declare that no one knows anything whatever about the action of drugs, and that, in diagnosing a patient's malady, "the general practitioner can hardly be said to do more than make a slightly modified guess."

Of course, like other propagandists, he finds it exhilarating to set up a scarecrow of his own manufacture, and then emit whoops of delight when he knocks it over. Of such is his assumption that the practice of medicine is held to be purely scientific, like mathematics or chemistry, and that the profession claims that all of its members are wise, competent and 100 percent pure.

Medicine is and, while the human race is constituted as at present, it always will be, at least fifty percent art; and the richest rewards, in money and in gratitude,

other things being equal, go to the men who are the most finished artists in their profession, of which fact we have no reason to be ashamed.

No group of 150,000 individuals—not even the literary doctor-baiters—can fail to contain selfish, stupid, incompetent and even dishonest members. But no one, save only a fool or a propagandist, would estimate an entire section of the population on the basis of its least desirable units.

But when the thoughtful (?) and temperate (?) Mr. Harding begins his eulogy of State Medicine, he becomes positively ludicrous. He assumes that the taking over of medical practice by the Government, as has been done in England (where, by the way, few or none of the really eminent medical men are "panel physicians"), would promptly make all its activities "thoroughly scientific"; would assure *every patient*, no matter what ailed him, a complete, "Mayo Clinic" examination, a report of which would cover 25 closely-written pages; would "eliminate quackery and pay competent doctors well"; and other surprising things. The last-named count is peculiarly funny in view of his statement that less than ten percent of physicians *are* competent, and of the fact that most men who are on the government pay roll are less industrious and sincere than those who are working, in comparable lines, with personal advancement as an incentive.

We admit that a diatribe like this of our's has little real value. So long as periodicals like the *Forum* will publish such articles as "How Scientific are Our Doctors?" there will be men to write stuff of that character.

Moreover, the people who know any *real doctors*—and that means, the vast bulk of the population—will recognize how grotesque this picture of the profession really is, though some of them are of a type that rejoices to see anyone stepped upon. In any case, these words will not reach the eyes of those who need to read them, nor, in all

probability would they touch their deeply-imbedded intellects if they did.

It is however, a pleasure to say a few words in defense of so earnest, loyal, sincere, unselfish and able a group as is the medical profession of the United States.

Scratch a cynic and, nine times out of ten, you find a neurotic.—Dr. Abraham Myerson.

AN ANTIDOTE FOR PACIFISM

THIS country has always been infested with pacifists—although that name for them came into being and general use only during the War—and they have been one of the chief reasons why we have never been ready for any armed conflict in our history. If we, alone, had ever come to blows with a first-class military power, we should have suffered humiliating defeat.

The United States never had a comprehensive and definite military policy until the National Defense Act, under which we are now operating, was passed, but now we have something to work on and some hope that, if another struggle comes, there will be a reasonably adequate force of officers who can distinguish between a lance-corporal and a major general and know why discipline is necessary, even if they do not make extensive use of it in their own lives.

We have consistently urged that every able-bodied physician between 25 and 50 years old should apply for a commission in the Organized Reserves. General Summerall, the Chief of Staff, speaking at the big medical training camp at Fort Snelling, Minnesota, in July, said that any man who had once held a commission and then dropped it—except, of course, for some very urgent cause—is a quitter. Strong words, but, we believe, justified.

In any case, every officer who now holds a commission in the Organized Reserves should be a member of the Reserve Officers' Association, for that is the only group in this country which has, if properly supported, the power and authority to compel the Congress to make adequate provision

for the meeting of possible future emergencies.

The pacifists are well organized, well financed and extremely vociferous, in season and out of season; the Regular Army is gagged and hog-tied—Colonel Mitchell was an example of what happens to a regular officer who speaks unflattering truths out loud; even the National Guard is hampered in the free expression of opinions. The only people connected with the military service, who can now say their say and bring pressure to bear in opposition to the pacifist propaganda, are the Reserve Officers—and the soft-headed opponents of adequate preparation for emergencies are about to have them muzzled as the Regular officers now are. If we do not wake up soon and do something about it, we will arise some fine morning and find that no voice can safely be raised against the pacifistic burlblings of the hordes of pale-pink sob-sisters (of both sexes).

The only logical antidote now visible against this pernicious and enervating social poison, is the Reserve Officers' Association; and everyone who believes that we should make some provision against dire possibilities, however remote they may seem to be, should lend the full weight of his influence and contribute the paltry sum which membership in this Association requires, to the end that our country may be *assured of remaining at peace*.

Remember that this is not the Association of Military Surgeons, to which many of our readers no doubt belong. That is a pleasant and worth while group, but it has no political significance and little antidotal power against the insidious poison which seems about to overcome us.

Join the Reserve Officers' Association!

Though man a thinking being is defined,
Few use the grand prerogative of mind.
How few think justly of the thinking few!
How many never think, who think they do!
—Jane Taylor.

We cannot think straight because we cannot be impersonal.—Joseph Jastrow.

CHEAPER HOSPITAL SERVICE

THERE can be little room for doubt that the fellow who earns from \$3,000 to \$5,000 a year is in a bad way if he develops an illness which requires treatment in a hospital. The wealthy man can afford to pay enough to partly make up for all the "charity" service rendered, but it is a bit tough on the small clerk or business man to leave him no alternative except joining the millionaires in paying the bills of the paupers, or entering the hospital as a charity patient himself.

Several experiments have been tried on the basis of reducing the cost of hospitalization, to the pay-patient, by eliminating the charity work and adjusting the charges on the basis of actual cost. The most ambitious of these is the Henry Ford Hospital, in Detroit. But Mr. Ford runs that "regardless"—the overhead is immense—charges the patient moderate, flat rates, gives them excellent service—and makes up the annual deficits out of his pocket, as a form of pet charity.

According to an announcement in the *New York Evening Post* for August 10, 1929, another group is ready to demonstrate its confidence in the thesis that a hospital can be run on this basis and be self-supporting.

The Warwick Valley Clinic, which it is planned to establish at Warwick, New York, within the suburban district of the Metropolis, is to have 300 beds, all of which will be paid for at \$2.50 to \$4.00 a day. The resident and consulting staff will be on straight salaries, and the maximum charge for any type of medical or surgical service will be \$175.00. All money so received will go to the Clinic, not to the individual physician, and will help to defray the overhead expenses.

This sounds like a beautiful scheme, IF:
(1) It is economically practicable; (2) A proper staff can be provided; (3) the public

will accept the idea and use the Clinic; and (4) the medical profession will back it up.

As to the first, Dr. M. R. Bradner, who has been running a 21-bed institution on this plan for some time, says it can be done.

They ought to be able to get three reasonably good consultants at \$10,000 a year, each and a chance to do some outside work.

But, will the people be willing to give up the privilege of employing the physician they personally desire, in order to make the saving in expenses? Some of them will, of course, because it will be a case of necessity. Those who can rake and scrape enough money to pay their own doctors and the fees of a hospital in which those doctors can care for them, will be rather likely to do so.

The support of the medical men is another problem. It would seem that the people to whom such an institution as this should appeal most strongly, are the very ones who furnish the backbone of the living of most general practitioners—the sound, reliable, honest, middle-class people. If the Clinic is likely to lure these away from the care of their family physicians, it is dif-

ficult to believe that the latter gentlemen will be overjoyed at the prospect.

Practically every proposition which, so far, has been advanced to ameliorate the medico-financial situation of the "man in between," has had features which tended to eliminate the general practitioner and give the beneficiaries a standardized medical service on a mass-production basis.

It is possible, of course, that the only relief from the "high cost of medical care"—which, largely, means *hospital* care—will be to do away with the practitioner and have smooth-running *doctoring machines*, scattered at suitable intervals over the country.

We may be old-fashioned, but we still feel that we have seen no satisfying substitute for the kindly and sympathetic interest; the wisdom, born of long and thorough knowledge of his patients; and the intimate and vital human relations, arising from long association, which are offered by the family doctor. Perhaps the pressure of modern life will force him out of our scheme of things, but we feel that the day of his going will be a sad day for Medicine and for most of our citizens.



LEADING ARTICLES

The Non-Operative Treatment of Hernia

With Special Reference to the Subcutaneous Injection Method

By IGNATZ MAYER, M.D., *Detroit, Mich.*

IN A SERIES of three papers, published in the *Medical Journal and Record* during the last three years*, I reviewed the history of the subcutaneous injection treatment for hernia, described my method, and stressed the economic waste involved in present-day methods of handling this common disability. Judging from the number of letters I have received from physicians, these articles aroused considerable interest in the profession, and I have decided to publish a general paper on the subject. Accordingly, I plan, in the present article, to summarize the reasons for and the technic and results of the non-operative treatment of hernia.

In general, there are three types of procedures for treating hernia; (1) The so-called radical "cure"; (2) the use of a truss for the rest of one's life; and (3) the subcutaneous injection treatment.

SURGICAL STATISTICS UNDULY OPTIMISTIC

Radical operation is the procedure almost invariably advocated in surgical circles, and impressive statistical results are generally reported. To one who has made a close study of hernia, however, it is apparent that these statistics are often misleading. It has been my experience to treat many patients with recurrent hernias, who had been classified by prominent surgeons as "cured," and so reported. The true frequency of recurrence after herniorrhaphy cannot be estimated, because the

prevailing method of follow-up study is based on the assumption that the hernia has been "cured" if the patient does not return for another operation. As a matter of fact, it should be obvious that one who has had an unsuccessful operation is not likely to come back and take another chance. The proper procedure in a follow-up study of surgical results, therefore, would be to classify as "apparent cures" only those patients who have lived vigorous lives for several years after the hernia operation and, on careful physical examination, show no evidence of a return of the hernial protrusion under stress. Based on a scientific study such as this, the figures for "cure" of hernia by operation would be comparatively modest.

If we review the history of the surgical method, we find that very little has been added within recent years. The Bassini and Halstead operations are still followed in principle, with minor and insignificant modifications. Perhaps the greatest improvement has been the use of spinal or regional anesthesia by some operators. However, tradition is so strong, even in scientific circles, that most surgeons still employ ether anesthesia.

The great majority of persons afflicted with a hernia wear a truss. Only a minority come for surgical treatment. Is it not remarkable that high percentages of "cures" are still reported, while the average person with a hernia, on the other hand, steadfastly persists in wearing a truss? If asked why he refuses operation, the usual reply is that he knows several persons who have had it done unsuccessfully.

*Mayer, I.: The Treatment of Hernia by Subcutaneous Injection, *M. J. and Record*, 125:672, 1927.
The Treatment of Hernia by Subcutaneous Injection, *M. J. and Record*, 128:415, 1928.

The Cost of Hernia to the Nation, *M. J. and Record*, 129:71, 1929.

THE USE OF A TRUSS

There are a number of good trusses to be had. It should be understood that the functions of a truss are to support the hernia and prevent protrusion of abdominal contents into the sac. These results can be accomplished with a variety of trusses, provided one knows how to fit them to the patient. Therefore, success depends, not so much on the kind of truss, as on skill in fitting it properly to the requirements in the individual case.

It should be apparent that no truss can "cure" a hernia. All that can be expected from its use is temporary support. In spite of the truss, the internal ring relaxes more and more, increasing the difficulty of retaining the hernia and requiring periodic changes to a new truss with a larger pad.

The only possibility of curing a hernia with a truss is in the case of a newborn child. Even then, "cure" is rare and, when it is attained, the infant requires constant and careful supervision. More often, the "cure" of a hernia is only apparent and the trouble recurs in later life.

Reputable manufacturers of trusses do not make exaggerated claims as to the "cure" of hernia, but merely offer temporary relief. The constant danger to the truss-wearer is that, no matter how well the appliance may fit today, there is always the possibility that the hernia may slip past it tomorrow and become strangulated.

THE SURGICAL ANATOMY OF HERNIA

By the term hernia in general is meant a swelling produced by the descent or protrusion of some part or parts which should normally be contained within the abdominal cavity. We are concerned chiefly with inguinal, femoral and umbilical hernias. The sites of these hernias are: (1) In the groin, scrotum or labia majora, in the case of inguinal hernia; (2) in the upper and fore-part of the thigh, in the case of femoral hernia; and (3) in the region of the umbilicus, in the case of umbilical hernia. The hernial contents are most frequently composed of omentum, to which one or more loops of intestine may be added. In rare cases, the stomach protrudes.

Both inguinal and femoral hernias escape from the body through natural openings, which, however, are more potential

than real in healthy subjects. Inguinal hernia descends through a canal in the aponeurosis of the external oblique muscle near the groin—the inguinal canal—which is designed for the passage of the spermatic vessels, in men, and the round ligament of the uterus, in women. Femoral hernias, on the other hand, pass under the hollow of Poupart's ligament, between the femoral vein and Gimbernat's ligament.

At the lower part of the abdomen, the fibers of the aponeurosis of the external oblique muscle separate to leave two apertures, the internal and external abdominal rings, through which the spermatic vessels, in men, and the round ligament of the uterus, in women, pass. These openings are oval in form and of larger size in men than in women. Hence, the greater frequency of inguinal hernia in the male.

The entire abdominal cavity is lined with peritoneum, which is a smooth, firm but easily dilated membrane. Hence, when a hernia begins to protrude, the peritoneum forms its first coat.

Next to the peritoneum is a loose, cellular membrane, presenting different anatomic characteristics in various locations. A portion of this membrane surrounds the spermatic vessels as they pass from the cavity of the abdomen into the groin and is called the tunica vaginalis of the cord. It is also known as the infundibuliform fascia and is an extension of the fascia of the transversalis muscle. It forms one of the coverings of a hernia as it descends into the groin. This structure must not be confused with the tunica vaginalis testis, which is a distinct membrane.

It should be remembered that the weakest layer of the abdomen—the peritoneum—lies opposite the natural opening in the aponeurosis of the external oblique muscle, the internal abdominal ring. The stress at this point is still further increased by the action of the abdominal muscles which, in performing their functions, naturally have a tendency to increase intra-abdominal pressure. The erect posture adds to the burden that must be borne by the lower abdominal wall. Hence, in the event of congenital weakness of the abdominal rings, an inguinal hernia is the result.

A distinction should be made between

indirect and direct inguinal hernias. The former type is by far the more common. It consists of a protrusion that enters at the internal abdominal ring, traverses the inguinal canal, and emerges at the external abdominal ring. A direct inguinal hernia never passes through the inguinal canal, but pushes through the relatively weak portion of the abdominal wall behind the external abdominal ring and finally emerges through this opening.

In children, descent or protrusion of the hernia happens most frequently when the child strains in crying. As soon as the effort ceases and the child becomes quiet, intra-abdominal pressure diminishes and the swelling disappears within the abdomen. A fact of importance is the greater size of the inguinal canal, relative to the size of the subject, in infancy. Later in life, the inguinal canal tends to close and becomes more potential than real.

In adults, the exciting cause of a hernia is most often great physical exertion, heavy lifting or a physiologic condition that increases intra-abdominal pressure.

Whether the hernia is inguinal, scrotal or femoral, and whether its contents consist of omentum or intestine or both, the protruded part necessarily carries before it a portion of the peritoneum. This peritoneal layer, containing the piece of omentum or gut, is called the hernial sac. Its size depends on the quantity of its contents.

SIGNS OF INGUINAL HERNIA

The distinguishing sign of an inguinal or scrotal hernia is a swelling or protrusion in the upper part of the scrotum or in the groin. Its appearance and consistency vary according to the nature of its contents. If the sac contains only a small portion of intestine, the protrusion is generally small and non-resistant. But if the intestinal loop is distended with gas, inflamed or constricted, it will be tense and tender and resist the pressure of the examining finger. On the contrary, if the hernia is not constricted by the aponeurosis of the external oblique muscle and its contents are not inflamed, there will be little tension or tenderness, regardless of the size of the protrusion. When the patient coughs, the hernia will feel as if it were being inflated and will generally be very easy to return.

When the hernia contains omentum, the

protrusion has a more flabby and unequal feel. A large mass of omental contents, in adults, is to some degree distinguishable by its weight.

If the hernial contents consist of both intestine and omentum, the characteristics will be less marked than in either of the preceding types.

Even though the portion of omentum in the scrotum remains uninjured, it renders the patient liable to hazard at any moment, by making it possible for a piece of the intestine to slip into the sac and thereby give rise to an intestinal hernia. The smaller the portion of gut engaged in the hernia, the tighter it is bound and the more hazardous therefore the chance of incarceration or strangulation.

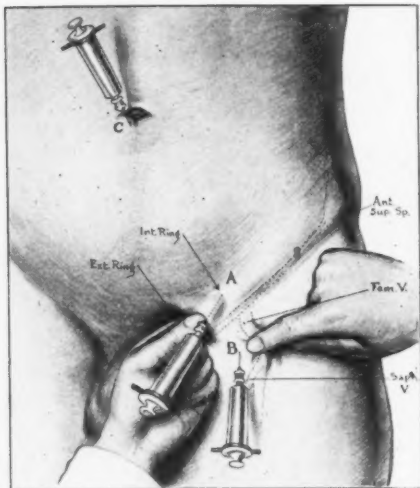
On the whole, it may be said that an intestinal hernia is subject to worse consequences than is an omental one, although the latter is by no means devoid of danger. Serious symptoms are more likely to attend a recent hernia than one of long duration. Also, a hernia consisting of gut alone is usually attended by worse consequences than one that is made up of both gut and omentum.

FEMORAL HERNIA

To understand the nature of crural or femoral hernia, we must recall that Poupart's ligament is nothing more than the inferior border of the aponeurosis of the external oblique muscle. Near its medial end, some of the fibers of Poupart's ligament are reflected inward to be attached to the ilio-pectineal line of the *os pubis*. This reflection is known as Gimbernat's ligament and forms the median boundary of the femoral ring, through which a femoral hernia passes. The external boundary is the femoral vein; the upper, Poupart's ligament.

Femoral hernia passes under Poupart's ligament and produces a protrusion on the upper and fore-part of the thigh. The sac is generally described as passing over the crural part of the vein, which is said to lie immediately behind it. However, from a study of the part on a cadaver, it is apparent that the descent is really made to the medial side of the crural vein and closer to the *os pubis* and Gimbernat's ligament. A distinguishing sign is the fact that the neck of a femoral hernia lies below Poupart's ligament, whereas that of an inguinal hernia is above this landmark. When

a femoral hernia is extensive, it tends to reach and emerge from the saphenous opening, which is the point of least resistance in the thigh.



The Anatomic Sites of Injection for Three Types of Hernia: A, Indirect Inguinal Hernia; B, Femoral Hernia; C, Umbilical Hernia.

UMBILICAL HERNIA

Like inguinal and femoral hernias, umbilical hernia may have as its contents either omentum, intestine or both. To a certain degree, infants are subject to this condition by reason of separation of the navel cord. In general, however, they either overcome it as they gain strength, or the condition is easily corrected by applying a firm binder.

It is of more importance to correct umbilical hernia in females than in males, because the condition may become troublesome during gestation. After delivery, however, if adhesions have not formed within the hernial sac, it is generally easier to return the contents, which may be kept within the abdomen by means of a firm bandage or truss. Subsequently, the subcutaneous injection treatment may be employed.

VENTRAL HERNIA

Ventral hernia may appear almost anywhere in the anterior wall of the abdomen, but the most frequent site is in or between the recti muscles. When reduced, it should be kept in place by a firm bandage. If there is a stricture that cannot be relieved otherwise, it should be carefully divided.

SUBCUTANEOUS INJECTION TREATMENT

In my experience, the routine treatment for hernia by subcutaneous injection yields far better results than those attained by radical surgery. The percentage of recurrences is less, the mortality is nil, and the inconvenience to the patient is reduced to a minimum. The last factor is of importance, because patients who will not submit to operation, because of fear and lack of confidence, have no hesitation in taking the injection treatment.

It must be distinctly understood that there are cases in which surgery is definitely indicated, but they are in the minority. In cases of strangulated hernia, surgery may be life-saving and no other procedure can take its place. When the hernia is incarcerated and cannot be reduced, surgery may also be required.

With the earlier methods employed, the subcutaneous injection method frequently caused severe pain and irritation. Today, however, the technic and the injection solution used have been so improved that irritation has been reduced to the degree necessary to form adhesions in the relaxed canal, and severe pain during the treatment is exceptional.

Formerly, it was necessary for the patient to remain in bed in the recumbent position for a considerable time after each injection. As a result, disability and loss of wages imposed a severe hardship.

With the method that I employ, this precaution is not necessary. Of course, the patient must wear a truss for a reasonable time after the injection treatment, because Nature really cures the hernia and the adhesions formed as a result of the injection must be given time to become firm and resistant. Also, a truss must be worn at all times. Even while taking a bath, the patient must replace his ordinary truss with a special rubber truss. Another point of importance is that work involving heavy lifting or other strain upon the abdominal muscles must be avoided, at least for some time after the treatment.

GENERAL TECHNIC

I place the patient on an operating table in the recumbent position. He must lie perfectly quiet with his feet slightly elevated.

After reducing the protruding intestinal sac or omentum and being convinced that the canal is entirely free, I invaginate the

left middle finger through the external abdominal ring and the inguinal canal until it reaches the outline of the internal abdominal ring. As the end of the middle finger is slightly raised and felt by inserting the forefinger, it serves as a perfect guide for the insertion of the needle.

I begin to insert the needle at the lower portion of the ring, at a point where its edges are felt through the abdominal parietes. One must be careful not to wound the spermatic cord. After the fluid has been injected, the needle is slowly withdrawn. Slight pressure over the site of the injection may be made for a few minutes in order to relieve any pain that may have been caused by the injection, but this measure is not essential and is seldom required.



Making the injection directly into the internal abdominal ring without invaginating the canal. This procedure requires experience and exact knowledge of the anatomic landmarks and is not recommended for those who have not employed the subcutaneous injection method extensively.

It is necessary to avoid passing the hypodermic needle in a perpendicular direction, in order to prevent the risk of injuring or penetrating the spermatic cord. Although the pain and inflammation caused by this accident may be controlled by application of an icebag, swelling of the cord persists for several weeks and delays continuation of treatment until the cord has resumed its normal size. To avoid this accident, care should be taken to enter the hypodermic needle obliquely, at an angle of about 45°.

Personally, I do not invaginate the scrotum. But, until one has acquired the necessary skill, it is essential to take some special precaution to be sure that the injection is made into the canal. A simple maneuver is to pass the left middle finger into the spermatic canal until it comes to the in-

guinal ring. By passing the left middle finger up with the invaginated scrotum upon it, the operator may assure himself that he is palpating the canal proper. In this manner, one can feel whether the canal is free and insert the needle with the other hand. Then the fluid may be injected.

In certain cases, injection through the internal ring is to be preferred. This is true in the case of children and highly nervous subjects, when too much manipulation is objectionable and the injections must be given rapidly. In such cases, I have given injections through the internal ring directly, without invagination; but, inasmuch as the internal ring cannot be palpated, its position must be absolutely located by means of anatomic landmarks. For this reason one must be thoroughly familiar and experienced with the localization of the internal ring before attempting to inject the fluid into the canal at this point. This procedure is more easily accomplished in lean than in obese patients. Anatomically, the internal abdominal ring lies midway between the anterior superior spine of the ilium and the symphysis pubis and about 1/2 inch above the point a little internal to the middle of Poupart's ligament.

Following the injection the patient must wear a truss constantly, day and night. This appliance must, of course, be properly shaped and fitted to the body. For general use I prefer the so-called frame truss. A



Applying the Truss after the Injection Treatment.

hard rubber truss should be furnished for use while taking a bath. While changing his appliance, the patient should lie down and be sure to keep the muscles of the abdominal wall relaxed, as the relief of hernia by the injection method depends on the formation of a connective tissue barrier, in response to the irritation of the injection fluid. It is apparent that a truss must be worn constantly until the newly formed connective tissue has had time to unite firmly.

The injection treatment is indicated in all cases of reducible hernia, regardless of the patient's age or the length of time that the hernia has existed. However, it is not advisable to employ it in the case of patients suffering from tuberculosis, venereal disease, diabetes mellitus or nephritis. The reason for these contraindications is, not the fear of any untoward result, but rather the likelihood that the formation of fibroplastic lymph, brought about by the injections, will not become sufficiently organized because of the low vitality of the patient. It must be remembered that, the greater the amount of serous effusion, the more certain is the desired result to be obtained, because without this effusion satisfactory closure of the canal cannot be effected.

TECHNIC FOR FEMALE PATIENTS

In the case of inguinal hernia, the technic is essentially the same as for male patients, with the exception that the round ligament is used as a guide, instead of the spermatic cord. The round ligament also appraises us of the approximate depth of the canal. Grasping the integument between the thumb and forefinger, the operator inserts the needle in this location, passing it from above downward, in a line with the body.

TECHNIC FOR FEMORAL HERNIA

Femoral hernia arises from below Poupart's ligament. This condition is much less frequent than inguinal hernia. The technic of making the injection into the femoral canal is somewhat similar to that for the inguinal canal; but care must be exercised not to injure the femoral vein, which lies posteriorly and externally to the hernial membrane. A femoral hernia requires less injection fluid than an inguinal one. The needle is inserted just above the internal saphenous vein and to the inner side of the femoral vein, which is held to

one side with the finger. As much greater skill is required for the treatment of femoral hernias than inguinal ones, it is recommended that the operator first familiarize himself thoroughly with the injection treatment for inguinal hernia.

TECHNIC FOR UMBILICAL HERNIA

It should be emphasized that all ventral hernias are not umbilical. Only true umbilical hernias should be treated by injection. For ventral hernias in the vicinity of the umbilicus, but not truly umbilical in origin, a surgical operation is preferable. In the treatment of umbilical hernia by injection, care must be taken not to puncture the peritoneum. A somewhat smaller and shorter needle than that used for inguinal hernia is preferable. The injections are made at the margins of the hernial ring, after the hernial contents have been carefully reduced.

TREATMENT FOR INFANTS

An infant with a simple hernia should be treated chiefly by hygienic measures. Epiplocele and other hernial masses in infants are best treated by massage, proper diet, counterirritation and similar measures. Pliable bandages, applied not too tightly, may be used for local support. Only when these conservative measures have failed, after a trial of from six months to one year, should we resort to the injection method.

In most infants with hernia, the condition is either congenital or develops soon after birth. Such a hernia may be caused by phimosis. The tight, adherent foreskin causes a strain, because of the impediment it offers to the escape of urine, since the mechanism of ordinary micturition is produced by the contraction of the muscular coat of the bladder. The force of the contraction required to overcome the resistance of the phimosis may result in a hernia. That is why it is wise to perform circumcision as part of the hygienic program. I am convinced that, if circumcision were performed as a routine measure for phimosis, the incidence of hernia in infancy would be greatly diminished.

THE SOLUTION USED

	Gr. m. or cc.
Zinc Sulphate	1 dr. 3.9
Phenol crystals	6 dr. 23.3
Glycerine (C. P.)	4 fl. dr. 15.0
Aqua cinnamomi	1 fl. oz. 30.0

Fl. ex. pinus canadensis (dark)	5 fl. dr.	18.5
Sterilized, chemically pure, redistilled water	2 fl. oz.	59.2

Preparation.—Dissolve the zinc sulphate in the cinnamon water; liquefy the phenol crystals by heating; add the glycerine; shake thoroughly until mixed and cooled, then add the distilled water and finally the fluid extract of pinus canadensis; shake thoroughly; allow the fluid to stand for about a week, agitating the mixture several times a day. Subsequently it should be filtered. Before injecting, boil the solution in a glass tube or place it in the sterilizer in a porcelain receptacle.

As compared with older injection solutions, this formula produces a greater flow of lymph with the smallest amount of irritation. The greater the amount of lymph flow produced, the more complete will be the obliteration of the canal.

The injection is made with a 1.5 cc. Luer syringe, equipped with slip-joint hypodermic needles of 21, 22 and 23 gage and from $\frac{3}{4}$ to $1\frac{1}{4}$ inches long. Injections are given from four to seven days apart, depending on the severity of the reaction. Usually from sixteen to thirty injections are required to close the ring.

At the first treatment only two minims (0.12 cc.) of the solution should be injected. Then the dose may be increased to from 8 to 16 minims (0.5 to 1 cc.), according to the degree of inflammation produced. In children, the dose is from 2 to 4 minims (0.12 to 0.24 cc.), once a week.

For femoral or umbilical hernia, $\frac{1}{2}$ of this dose is preferred; that is, from 4 to 8 minims for adults, and 1 to 2 minims for children.

RESULTS

I have employed the subcutaneous in-

jection method for inguinal, femoral and umbilical hernias in more than 2,100 cases. This work now covers a period of thirty years, during which I have devoted my time exclusively to this procedure. Hence, I cannot be accused of being hasty in my evaluation of the method.

With regard to permanent results, my check-up shows that lasting relief from the hernia was obtained in 98 percent of cases. I have on record data with regard to more than two hundred cases in which radical operation was followed by a recurrence, but in which the use of the subcutaneous injection method subsequently brought about complete relief.

CONCLUSIONS

1.—Surgical statistics with regard to the "cure" of hernia by radical operation are unduly optimistic. Many more recurrences are seen than is commonly supposed.

2.—A truss, properly fitted to the individual patient, can accomplish temporary retention, but nothing more. It has its purpose but is only an expedient. It cannot anatomically cure a hernia.

3.—Subcutaneous injections, into the hernial canal, of a fluid designed to promote the flow of plastic lymph, offer the nearest approach to physiologic cure by obliterating the patent canal, the cause of the hernia.

4.—In a series of 2,100 cases of inguinal, femoral and umbilical hernia, the subcutaneous injection method gave complete relief, without recurrence after a period of years, in 98 percent of cases.

5.—In more than two hundred cases, hernias recurring after operation and reported as surgical "cures" were subsequently relieved completely by the subcutaneous injection method.

Detroit Savings Bank Building.

INTUITION

No intellectual striving will bring us to the heart of things. We can only lay ourselves open to the influences of the world, and the living intuition will be born in its own due time.—BERGSON.

The Minimum Standard for Obstetrics*

By J. L. PRITCHARD, B.S., M.S., M.D., San Jose, Calif.

DURING the past two years, I have been privileged to study and observe many angles to obstetrics that previously had not been brought to my attention. It is with pleasure that I take this opportunity to present some of my ideas on this subject, which I trust may prove helpful.

The practice of obstetrics, unquestionably, is one of the most important branches of Medicine. When one conducts a pregnant woman through a real attack of hyperemesis, followed by a kidney complication, with hypertension, placenta previa, contracted pelvis, posterior position, premature rupture of the membranes or an abnormal presentation, and delivers a live, uninjured baby, bringing the mother through in good condition, then one will realize that obstetrics requires a very high degree of medical and surgical skill.

Of course, these complications do not occur in every case, but Schroeder says that 32 percent of cases are to be considered as difficult labor. Disregarding the actual percentage, vital statistics indicate that at least 20,000 women in these United States die every year in childbirth or from its sequelae. The number of babies that are lost can only be guessed at. The U. S. Children's Bureau tells us that, of those babies who live, but whose mothers die, four times as many perish as is the case when the mother lives for a year or more after giving birth.

In addition to the new-born babe, there are often other children to be cared for. The loss of a mother brings with it a whole train of griefs that a generation cannot eradicate. Very often, I hear a woman lamenting that her mother died at her birth or in childbirth later, and that she had been deprived of a mother's care and love.

It is a fact of which we are not proud, that the United States stands 19th among the nations reporting on maternal mortality, being next to the bottom of the list. We must acknowledge our disgraceful standing, but the crying shame of it is that so little is being done about it. If Den-

mark, Sweden, Germany and Belgium—if 18 nations of the world can show better obstetric service than is rendered in the United States, we ought to know the reason why and make every effort to remedy the situation.

DANGERS OF PREGNANCY AND LABOR

De Lee has taught, for many years, that parturition is a pathologic process. He first went on record to that effect before the International Congress of Physicians and Surgeons, in London, in 1913. The idea was not original with him, but had been taught for decades by a few accoucheurs. Williams says that 50 percent of pregnant women present evidence of toxemia which he classifies as pathologic. Douglas, of Scotland, has concisely put this situation. He said, "The parous woman, *ipso facto*, is apt to die." We all know that the pregnant woman is more likely to die from influenza, tuberculosis, heart disease, nephritis, etc. Mauriceau called pregnancy a disease of nine months' duration.

The endless number of women who complain that they are not well since giving birth to their babies, is well known. It is safe to say that 50 percent of women who have children, later become gynecologic patients and suffer more or less from the injuries received in childbirth. Polak says, "Sixty-one percent of our gynecologic practice is the direct result of poor obstetrics, and thousands of children are sacrificed or crippled by ill-advised and faulty obstetric operations"; also, "It is not too much to state that at least 75 percent of our mortality in childbirth is preventable by intelligent, painstaking, ante-partum and post-partum care and obstetric methods."

In his book, "Birth Injuries of the Child," Ehrenfest states that 40 percent of the still-born babies show some intracranial trauma as the cause of death. Improperly conducted labor is often the cause. The improper use of pituitrin comes in for a large share of the blame.

The public is beginning to demand obstetric service. The more intelligent women are beginning to appreciate the value of proper prenatal observation and the technic achieved by the conscientious,

*Read before the O'Connor Hospital Staff, May 14, 1929.

up-to-date accoucheur. More women than ever before are going to a hospital for confinement. All would be confined at a hospital if they could meet the extra expense.

A ray of hope, in this regard, comes from a recent movement in Chicago, initiated by His Eminence, Cardinal Mundelein. About one year ago, four of our great social foundations placed at the disposal of a committee headed by Dr. Wilbur, a sum of money to be expended in making an investigation of the so-called "High Cost of Medical Care." Under the Cardinal's plan, a hospital has been secured where a mother may go for her confinement and where her younger children will be cared for while she is there; all for a charge of \$50.00. Surely such an arrangement will be a boon to many families.

The time is most opportune for taking a great step forward in the practice of obstetrics. Much publicity has been given to prenatal care. The general public is becoming so well informed about how obstetric cases should be handled, that most patients know more than they are given credit for knowing. They are reading books and magazine articles and, consequently, many are quite well posted on the subject. The medical profession and the hospital should not lag behind in this forward movement. Statistics and obstetric and gynecologic literature from all parts of the country, indicate the need for a great advance all along the line.

ADEQUATE CARE

In order to put into practice what we already know, I propose that we establish an irreducible minimum standard for the supervision of confinements.

The general principles of prenatal care are too well known to be considered here in detail. The prospective mother should consult an obstetrician as soon as she feels that she has missed a period due to conception. It is my practice to have the patient visit my office at least every two weeks and, during the last two months, every week. The weight and blood pressure are taken and the urine examined at every visit. At an early visit, I make a complete physical examination, with pelvic measurements, and take blood for a Wassermann test. Any disease condition or variation from normal is given proper attention as gestation advances.

When labor begins, the patient goes to the hospital. The outcome of the nine months prenatal care depends upon what happens in the few hours intervening before delivery. All the prenatal care put together will not insure a live baby nor an uninjured mother. Many things go wrong in the last hours, or even the last minutes. Fine rooms and beds and sterilizers will not help much then.

One essential factor for the successful labor is an efficiently trained staff of nurses. No surgeon operates on two patients at the same time. The obstetrician has the lives of two human beings depending upon him. The surgeon has an assistant, a qualified anesthetist and two or three trained nurses to do an ordinary operation. He has good lights and plenty of instruments and, above all, plenty of time. The obstetrician usually has no assistant, sometimes an anesthetist, and usually an untrained student nurse to help. He must watch the mother and watch the baby. Delivery must be accomplished with dispatch, in case either manifests danger signals.

THE MATERNITY SERVICE

What are some of the features demanded of an up-to-date maternity service?

A maternity hospital should be an institution within itself, entirely separate from the general hospital. Lacking that, we must give our attention to the existing conditions—the maternity department in a general hospital.

De Lee says, "A maternity ward in a general hospital is a dangerous place for a woman to have a baby." The ever-present danger from such an arrangement is from infection and contagion. The major cause of the 20,000 maternal deaths annually in the United States is septicemia, resulting largely from infection at delivery or improper post-partum care. Authorities state that about 5,000 mothers die every year from septicemia, while about 100,000 contract it and suffer more or less permanent disability.

With these facts in mind, we must exercise eternal vigilance to prevent infection. Every procedure in the department must be above reproach. From the doctor down to the scrub woman, the most sedulous care must be observed to maintain a perfect technique.

If we are going to improve our obstetric service, it must be done along certain fun-

damental lines. I would propose that a committee of from three to five members of the hospital staff, who are interested, be charged with the work of promoting the welfare of the obstetric department. An irreducible minimum, in labor and delivery room technic, should be established. To begin with, the doctors themselves should be imbued with the spirit of progress and should be practicing obstetrics as it can be done today, and not as it was done twenty years ago.

The supervising nurses should be thoroughly trained for their job. There should be two, and better three, because an obstetric service functions twenty-four hours a day. These supervising nurses should have had postgraduate work, in order to become obstetric-minded. There is something about a good obstetric supervisor that gives the doctor a great sense of security and helps immeasurably in getting through a difficult delivery.

We must teach the doctors and all the nurses to recognize the full significance of the obstetric case. Then, and then only, will we have everything done in the maternity service with the same thoroughness as it is done in the surgery. The following are some of the laws that should be rigidly enforced:

1.—Visitors should not be allowed in the delivery room.

2.—Visiting children should be excluded from the maternity department.

3.—Masks should be worn by doctors and by all nurses, in the delivery room and when doing operations, such as circumcisions.

A mask should be worn by the nurse who bathes the babies. Many skin infections can be traced to the nurse who, by droplets from her nose and mouth, planted colonies of bacteria on that excellent culture medium—a new-born baby's skin.

4.—Remove mothers and babies with infections to isolated quarters promptly. Infected breasts follow skin infections of the baby.

5.—No vaginal examinations should be made when rectal examinations will suffice; and no more rectal examinations than are absolutely necessary. Bailey holds that rectal examinations are as bad as vaginal.

IDENTIFICATION OF INFANTS

An infallible method of infant identification should be adopted. In a small ma-

ternity service there is not much danger of mixing babies, but it has been done many times. A system should be devised that will absolutely prevent any chance of the question even arising, for "doubt is the human feeling easiest to arouse and hardest to allay." The method should be so precise that parents, shown the different steps, would hesitate to believe that there was even a possibility for mistaken identity.

Many methods are now in vogue, but no single method has been found to fill the requirement set forth. The following combination is practically proof against any human error.

1.—When the mother in labor enters the birth room, the name of the father and mother are written in the time book. As labor advances, the time of rupture of the membranes, the time of delivery, the sex and weight of the child, the time of delivery of the placenta, the final position and presentation, the nature of the birth, the name of the physician, the name of the nurse who scrubbed, and the navel-wrist number are entered.

2.—When the baby is born, the cord is tied with a sterile tape, bearing a numbered aluminum tag—the physician calling the number out loud. Before the cord is cut, a tape bearing the same number is placed around the baby's wrist. As these numbers are called aloud, any disagreement is noted.

3.—A nurse at once fills out the blanks on an adhesive-plaster tag and fastens it on the infant's back. The adhesive tag has the name of the father and mother, the physician, sex of the baby, date of birth, and navel-wrist number. The baby may now be moved from the birth room to be weighed and dressed.

4.—The foot prints are next made, one copy on the mother's chart, and one on a sheet of paper, to be given to the mother. This slip has the name and sex of the baby, its birth weight and date of birth, the name of the physician and navel-wrist number.

5.—When the child reaches the nursery, its crib card is written out. This has the name, sex, date of birth, name of the physician and navel-wrist number.

6.—The nurses are taught to read the back plaster before the baby is sent in for circumcision or is sent home. The wrist number of the baby is easily compared with the wrist number of the mother when the baby is brought in to nurse. In all cases, the

baby goes home wearing the wrist number and the back plaster.

With this system, which is adapted from that of the Chicago Lying-In Hospital, the identity of a child could be proven to the full satisfaction of any jury.

In establishing a minimum standard for obstetrics, we must be mindful of the dangers that prevail. Polak, Bailey, Williams, De Lee and many others have pointed out our shortcomings, times without number.

Eighty-two years ago, Semmelweis expressed himself on puerperal septicemia as follows:

"When I, with my present convictions, look back upon the past, I can only dispel the sadness which falls upon me by gazing, at the same time, into that happy future when, with the lying-in hospitals, and also outside of them, throughout the whole world, only cases of self-infection will occur.

"But, if it is not vouchsafed me to look upon that happy time with my own eyes, from which misfortune may God preserve me, the conviction that such a time must inevitably arrive sooner or later, after I have passed away, will cheer my dying hour."

Semmelweis died, and four generations have passed since his death. Many great obstetricians, during that time, have worked unceasingly to better obstetric practice, but yet the "happy future" that Semmelweis looked forward to has not been achieved.

Of the 20,000 who die annually in childbirth, our leading obstetricians tell us, 75 percent, or 15,000, can be saved by proper obstetric treatment. Is not saving the lives of these 15,000 mothers; protecting the health of countless others; saving the lives of innumerable babies and preventing birth injuries, worth a little more effort? If 18 nations of the world are giving better obstetric service than the United States is giving, we can do better.

SUMMARY

In maternal mortality, the United States stands number 19 in the list of civilized nations.

It is estimated that 20,000 women die annually from childbirth, while 5,000 of that number die from septicemia. Approximately 100,000 become infected annually and, as a result, usually are invalids the remainder of their lives.

Sixty-one percent of our gynecologic practice is due to poor obstetrics.

Better organization of the obstetric personnel, with more efficient supervision, is needed to bring the obstetric department to a par with the surgery.

An infallible system for infant identification should be established.

Oral Cancer

Its Prevention through Medical and Dental Cooperation

By A. T. RASMUSSEN, D.D.S., *La Crosse, Wis.*

NO PART of the body is oftener examined than the oral cavity. Possibly "looked into" would be a better term than "examined," for too often it gets only a casual glance, with a consequent failure to recognize the things that are seen. This is equally true of the general physician and the dentist. In fact, we can safely include all the branches and specialties of the whole field of medicine and surgery.

Of all mouth lesions, cancer demands our attention first, last, and all the time, for it is only by early recognition and treatment that we can hope to effect a cure. More important than this, however, is the fact that careful observation and proper medical and dental cooperation will, in many cases,

prevent the development of a cancer by recognizing precancerous lesions, or the causes of chronic irritations that may lead to cancer.

Cancer is always a purely local lesion to begin with. At the same time, the early tendency to metastasis removes it from the class of diseases that can be viewed as local, at any time after a demonstrable cancerous growth is present.

The one known predisposing cause of cancer is chronic irritation. Possibilities of continued irritation are more frequently met with in the mouth than in any other part of the body. In a former article¹ I have enumerated some of the causes of irritation commonly found in the mouths of patients.

Most of these the dentist is in better position to recognize and remedy than is the general physician or surgeon. I use the term "general" to designate the physician who does not specialize in any particular branch of the healing art. Dentistry being one branch of the whole field of medicine and surgery, it is necessary to differentiate between one who specializes in that field and the physician in general practice.

Further, the dentist, if he practices his specialty as it should be practiced, will, by his care of the mouth, largely prevent irritation through such advice or operations as may be indicated in each case. To accomplish this requires, many times, the closest observation by a well trained specialist in stomatology, or dentistry if you please.

On the other hand, there are many general systemic diseases which manifest themselves first, or especially, in the mouth. It is, therefore, equally important that the general physician be consulted, in order to establish the possible connection between some oral disturbance and some general systemic disease or remote lesion. Very often a positive diagnosis can be arrived at only by a process of elimination, thus excluding all other possible sources of the trouble. In such cases it is evident that the closest co-operation is necessary, to the end that no important possible or probable causative or contributing factor be overlooked.

As things are at the present time, the dentist is too often content to view the oral cavity as a place provided for the teeth, which he considers as his "field of operations," forgetting that the real field of his specialty is that part of the body composed of the oral cavity and associated parts, and that all are integral parts of the whole body. He may also overlook the fact that, in order to treat diseases or lesions of the oral cavity intelligently, he must have a general working knowledge of the whole field of medicine and surgery.

Again, the specialist in any field may fail to recognize the fact that a disturbance of any one part of the body affects the whole, and that there can be no such thing as a strictly local effect of any treatment whatsoever, since each part or organ is interdependent upon all the others.

Likewise, the general physician, with his limited knowledge of the finer anatomy and special pathology of the oral cavity, cannot, nor should he, rightfully be expected to make a final diagnosis of mouth lesions

without consulting with a competent, well-trained and experienced dental surgeon, who can see beyond a carious tooth or an opportunity to construct an artificial substitute for lost teeth.

PHYSICIAN AND DENTIST MUST COOPERATE

No one, living or dead, has yet been able to make himself equally efficient in all the branches of the healing art. Therefore it cannot rightfully be expected that the general physician should assume all the responsibility where special structures are involved. Neither should the general physician or surgeon determine, without proper consultations, what line of treatment or operation is indicated in diseases of the oral cavity, whether it be cancer or what-not.

The dentist, who has made a special study of stomatology is usually in a better position to decide the kind of treatment, or what operation will accomplish the most for the patient, once the nature of the disease or lesion has been established, especially if the disturbance has its source in the oral cavity, with possibly remote or general systemic disturbances resulting.

On the other hand, if the lesions in the oral cavity are found to be local symptoms of a general systemic disease, the general physician should be in better position to outline the treatment best suited, while the specialist may materially assist by caring for the oral lesions that might be a contributing factor to, or aggravating the condition of the patient.

Bloodgood believes that cancer of the mouth is preventable. That it can be materially reduced there is no question. However, if this is to be accomplished to anywhere near the extent possible, it will come only as a result of better and closer medical and dental cooperation. Both the general physician and the dentist should know the facts about cancer of the oral cavity, and knowing them, each is in duty bound to pass along such information to his patients as will serve to warn them of the danger that often lies ahead if those benign growths, or seemingly harmless and unnoticed irritations, are neglected.

Medical and dental cooperation in educating the laity will do more to prevent cancer of the oral cavity than will all other means put together. Pulling together we will accomplish vastly more than each one pulling alone.

It is unfortunate, in my opinion, that dentistry has been separated so much from the mother profession of general medicine, and I trust that the day is not far distant when they will again be united in fact, inasmuch as both are engaged in the same high calling, namely, the alleviation of human

suffering. In the meantime, let us have that cooperation which will surely make us happier and our patients healthier.

211-212 Linker Bldg.

1.—Rasmussen, A. T., *Cancer of The Mouth, Jour. Am. Dent. Ass'n.*, Feb., 1929.

The Etiology and Treatment of Medical Economic Disorders

By NORMAN ZOLLA, M.D., Chicago

YEARS ago, when all forms of business life had not attained their present complexity, there was no such thing thought of as medical economics. The practice of medicine was conducted solely by the family physician. Medical practice was simple and so was the business transaction between doctor and patient. The physician was the man, in those days, who governed, guided and counselled his patients in many matters unrelated to medicine, and he was a real spiritual and upbuilding factor in his community.

The practice of medicine has been undergoing a decided change during the past few years. The age-old ethical code, which has been and still is the rule and guide for the conduct of the Doctor of Medicine, is being torn down and demolished by unscrupulous politicians, gigantic universities, commercialized institutions, and possibly well-meaning, but over-zealous and misguided, philanthropists. And the poor doctor, content with his code, stands by helpless, unorganized economically, endeavoring somehow to combat this great untoward influence which threatens to engulf him, and trusting to fate to help him weather the onslaught of modern commercialism.

While I deplore the loss of caste the doctor has sustained, I appreciate the fact it is not and never was his scientific side that was attacked by the people; it is his lack of business acumen that has brought about his present predicament. It is not his knowledge, or lack of it, that comes up for objection by the masses; it is his utter lack of business principles in the application of his efforts. He does not know how to sell his service. I do not mean to infer that the

physician's lack of business ability is the sole factor of his economic discomfort today; it is only one of the many causes.

ETIOLOGY

Let us consider the etiology first, and then the treatment of these medical economic disorders, after the fashion of our study of organic diseases.

Under the exciting causes we would list:

- 1.—Quacks and cultists.
- 2.—Pay clinics—including all commercialized colleges, hospitals and health institutes.
- 3.—Life extension bureaus.
- 4.—Unscrupulous politicians.
- 5.—Misguided, over-zealous philanthropists.
- 6.—Practice of medicine by City and State.
- 7.—Attendance of middle-class patients at free hospital clinics.

Under predisposing causes, or contributing factors:

- 1.—Inertia, individual and collective.
- 2.—Outworn ethical code.
- 3.—Lack of teaching of business administration in medical schools.

Let us consider, somewhat in detail, these enumerated factors.

Quacks and Cultists

We have become accustomed to the competition of the quacks and cultists and have secretly belittled their powers. We have trusted to the common sense of the people to discover the vast discrepancy twixt tinsel and gold, and, as an organized body, have exerted no direct effort to influence them against charlatanry and quackery.

The Pay Clinic

Under this heading are included health institutes and gigantic universities practicing commercialized medicine.

When we heard first of the pay clinic it was reckoned as a possible small, local, economic irritant to the doctor and thought of as something unpleasant for that particular locality. But these clinics have spread, and are spreading, and have now become a potent factor in the reduction of the finances of the general practitioner.

When the first pay clinic was opened, a new catechism of medical conduct was written into the professional activities of the Doctor of Medicine without, however, consulting him. We could still have our code and they would have theirs—one set of rules for the general practitioner and another for the commercialized university. These medical colleges, practicing commercial medicine, have become extremely successful competitors of the general practitioner.

Life Extension Bureaus

The so-called health insurance companies offer a physical examination and quarterly uranalysis. The physician making the examination gets from three to five dollars for his work; and the company receives \$15 to \$25 for its business ability. This is another means of exploiting the doctor—and the doctor himself is the party of the second part in his own exploitation.

Unscrupulous Politicians

I need not say much about those who are elected by the populace to act as their trustees, and who betray the people so frequently. They often pull all sorts of wires and vote in accordance with the highest bidder. That is why many states cannot enact a decent medical practice act or a bill against corporations practicing medicine.

Misguided, Overzealous Philanthropists

Millionaires, as a rule, are not questioned as to how they obtained their wealth. They have it! and society recognizes their superior status.

I do not know what compelling idea dominates the minds of those wealthy individuals who endow medical colleges. Has it a moral background? A religious one? Do they suffer qualms of conscience for their misdeeds in the procurement of their wealth? And is the endowment their act

of atonement? It is said that Henry Ford conceived the notion of a vast commissary department and actually equipped it. He was going to buy all the provisions in great quantities and resell them to his employees at a price just covering the cost and carrying charges. But the grocers of Detroit held an indignation meeting. It meant their extermination if the plan materialized. A committee met with Ford and explained to him that he was very generous at their expense and that if he wished to carry out his great altruistic ideals he ought to do so in his own industry, by selling his cars at cost. Ford never opened the commissary!

Why do the rich men who suddenly become altruistic decide to endow pay clinics, instead of feeding or clothing or housing these people whom they wish to serve at cost? Surely this great middle class, about whom these generous souls are so concerned, must be fed, clothed and housed properly. And the children need music lessons, and development in the other art branches. Why not give them free lessons in music, sculpturing, painting, etc.? Why do not the universities distribute free plans for home building for this great, neglected middle class?

Practice of Medicine by City and State

I appreciate the fact that it is often difficult to draw the line between preventive and curative medicine, but I feel sure that the drawing of that line should come within the province of the County and State Medical Societies.

There are certain functions that pertain, absolutely and unqualifiedly, to the City and State—such duties as the effective regulation and maintenance of quarantine laws, the supervision of water and milk supplies, public sanitation and hygiene, etc.—but the indiscriminate vaccination against smallpox, the administration of diphtheria antitoxin and toxin-antitoxin, free physical examinations, prescribing and treatment by city nurses, all done without regard to the patient's financial status, are not proper functions of the City and State, but of a well organized, smoothly working county medical society, assisted by the City and State.

Now we will take up the contributing factors, or predisposing etiology. Here we find:

- 1.—Inertia.
- 2.—Outworn ethical code.

3.—Lack of teaching of business administration in medical schools.

4.—Lack of proper advertising to the laity.

5.—Lack of cooperation for business purposes.

Inertia

The definition of inertia: "That property of matter by which it tends to remain in the state in which found," is very applicable to the doctor. He wants to remain just as he always was.

The profession has fallen into a rut and cannot yet extricate itself. Neither the doctor himself nor his medical society concerned themselves with any financial matters, outside of taking his fee when offered, until comparatively recently, when the economic disorders became so grossly manifest that it decidedly irritated and menaced his future economic welfare.

Ethical Code

Our code of ethics is outworn, out of date, no longer applicable to the modern business age and needs to be revised accordingly.

Lack of Teaching of Business Administration in Medical Schools

No attempt is made to teach the undergraduate modern business methods, which should include such studies as finance, organization principles, medical practice acts, legislative lobbying, how to run an office, functions of a medical society, how big business operates, how union labor operates, economics, business psychology, how best to sell his services, etc. Surely it is essential to his future career that he understand how to deal with those matters which vitally affect his financial status.

TREATMENT

These disorders, being of diversified etiology, the treatment necessarily is complex; but whatever form of treatment is instituted it must be vigorously prosecuted and direct, forceful, firm and continuous to be curative. The treatment must be specific and general; local and national. To be effective, the measures utilized must be employed in so decisive a manner that it will result in the building up of a great, powerful, unified medical profession of the whole of our Country.

Many factors must necessarily enter into this gigantic scheme to reorganize a medical

society, which heretofore has concerned itself solely with scientific endeavor, on a new basis of activity dealing with direct, economic betterment, in conjunction with scientific procedure.

Many tasks will, of necessity, have to be performed simultaneously, but one of the first things we must do is to control and harmonize our membership into unity of thought and action, and from that will follow the control of medical activities. A determined effort must be made to get every desirable practicing physician enrolled in the county society in which he belongs. There are about 150,000 physicians in our country. Think of the formidable array of strength and brainpower they would present if massed into one large national organization, with the local societies as component parts! These conditions exist today, to a certain, but unsatisfactory degree. The potential strength of this colossus has not yet even been tapped. Think of what 150,000 men can do, if they act in unison! Why, we can become one of the biggest forces in the nation!

Some may object to the term "industry" in connection with the medical profession. We have one commodity to sell—service. We could create bigger and better medical measures which would benefit the people, legitimately, ethically, and in turn provide a larger return for the doctor: For instance, periodic health examinations. Individual practitioners can not sell many of them, but an organization of 150,000 men could sell the nation a health inventory.

We ought to make every medical student a junior, non-dues-paying member of the County Society in the county where his school is located, and pledge him to carry on the principles and ethics of organized medicine, of which he automatically becomes a part on completion of his undergraduate work. In his last year he should be taught business administration and economics, with especial relationship to the business side of the practice of medicine. By so doing, we could control the future doctor at the source; and if, by precept and example, we teach the embryo physicians that each doctor is not a unit unto himself, but rather a part of a whole; that the era of individualism in the practice of medicine is fast waning; and that the order of the day is combination of medical forces and greater cooperation between the medical men for the attainment of their best indi-

vidual interests, then we need entertain no fears as to the future of the private practice of medicine.

To me, the key to the solution of our problems lies in the effectiveness of greater solidarity among the doctors themselves. Instead of being a quiet, dignified, acquiescent body of men, we must become aggressive, more modern, intensely active, ever

alert and jealously guarding our cherished prerogatives, and, withal maintaining our dignity.

If we can carry out this principle to fruition, we can then control all medical affairs and dominate all activities which rightfully come under the sway of the physician.

6850 Stony Island Ave.

Ethnology of the Kalahari Bushmen

By WILL J. CAMERON, Chicago

A LITTLE over a year ago, I equipped an expedition for research and exploration in the heart of Africa. My work has had to do with the devising of equipment and electrically lighted instruments for diagnosis and surgery, and so I have always been interested in the health problems of modern man. It was not such a far cry, then, to the study of primitive man—the Kalahari Bushman.

Then, too, my friend, Dr. Dart, of the Witwatersrand University, had recently authenticated the **Taungs Skull**—unearthed in a limestone quarry close to the haunts of the Bushmen. This Taungs Skull Dr. Dart has estimated as being over 50,000 years old, and so it ranks with that of the Java, the Heidelberg and the Piltown men and is of great interest to those anthropologically inclined. Most of us, at one time or another, take more than a passing interest in when and where we are going, and some few of us at least are curious as to where we came from.

So the urge became a reality and we started from Chicago on Decoration Day, 1928. Associated with me were C. Ernest Cadle, anthropologist, Richard L. Mannen, geologist, Fred Parrish, cinematographer and Henry Hoder, mechanician.

We shipped a couple of two-ton, Diamond-T trucks to Capetown, with complete camping, hunting and camera equipment for several months' stay in the wilds.

Most of our time was spent in the Kalahari desert—that vast tract of barren country lying between the Orange and Zambesi Rivers in South West Africa. This is the one place where, today, may be found the Stone-Age man, living under Stone-Age conditions with the Stone-Age animals—the elephant, the rhino, the hippo and the dassie.

Because of the inaccessibility of the desert, due to the shifting sand and the scarcity of water, the Kalahari Bushmen have been able to preserve their entity for centuries by retreating into the desert before the invading Kaffir hordes. Although touching elbows with our civilization, they are separate and apart from it and are living virtually as did our forefathers of the glacial period

in Europe, fifty thousand and more years ago.

The pure-blood bushman is undersized and copper-colored, with facial characteristics more of the Arabic than the Negroid type, and it is not unlikely that these people inhabited this section long before the

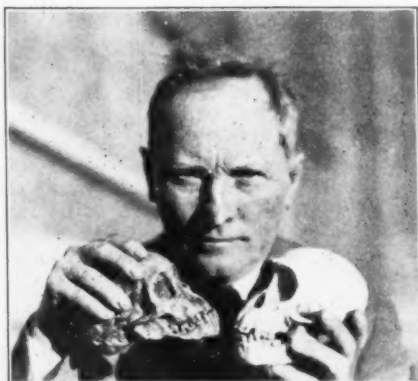


FIG. 1.—Will J. Cameron holding the skull of a baboon and the Taungs Skull (left), the most unusual find of Dr. Dart of the Witwatersrand University, and of real interest and value to the students of prehistoric and ancient man.



Fig. 2.—Dr. Cadle and Masari bushwomen in native costume—an antelope hide for dress and another for carrying the baby, and decorations of ostrich egg shell beads.

Bantu tribes came down from the North and East. Only when the occasional rains fell were the invaders of the desert able to stand the heat and drouth, kill the men, and capture the women and children of the bushmen. Now that the country is administered by the British, warfare is taboo; but peace is more destructive to the Bushman than war has been, and he will soon disappear by negroid admixture.

The Bushman is an individualist. He has no headman or chieftain. One or two families live at an isolated water-hole and follow the wild game in their migrations, for the Bushman is a meat eater and of the pure hunter type. He does not cultivate the ground and has no cattle, so he is an adept at spearing and hunting, for he must get close to his game to wound it with his poisoned arrows. His bow and arrows are crude, with tips of flint and bone, but the poison tip is deadly. They use the venom of the cobra, puff-adder and that from a spider, together with vegetable juices. They keep their formula a secret, and once or twice a year they hold a ritual for the manufacture of their ammunition; each of them contributing his share to the poison potion.

Two or three hunt together, camouflaging themselves in the hides of wild animals, in the skin of the ostrich or in grass disguises, and they rarely risk a shot at more

than twenty or thirty yards. Then they take the trail of the wounded animal, and sometimes have to follow one of the larger antelopes for hours before it drops, for the poison, though deadly, is not immediate in effect.

Though the bushman is a hunter he can scarcely be rated as a sportsman, for he would much rather find his game dead than hunt it himself. So here the lion is his friend as well as his enemy, for if he hears the lions roar at night, announcing a kill, he takes the trail early, for the circling of the vultures will lead him to the remnants of the carcass, and if he can beat the jackals and vultures to it, he may have zebra steak for breakfast.

The bushman builds no hut or house for his family, and at night they lie down under a crude, brush shelter wherever they may be.

They use less care in the preparation of their beds than does the gorilla. They do not even carry an extra antelope skin with which to cover themselves at night. Though the temperature ranges from 100° to 130°F. in the daytime, frost will frequently form on the water at night. They make their fire by friction, holding the wood with their feet. They have no dishes and they cook their meat by throwing it into the open fire, tearing it with their hands and teeth. Marrow-bones, which they roast and break on stones, are their great luxury. What they cannot eat they rub on their limbs, and this is their only bath, for they never use water.

The bushwoman, having no housekeeping to do, is Queen of the May. Only when faced by starvation does she search for the occasional edible roots, for there is little fruit in the veldt. The children are usually fed at the breast until they are

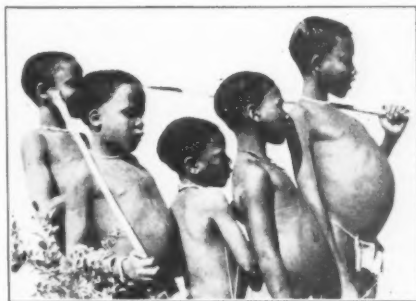


Fig. 3.—The elastic stomachs of the bush boys are something to marvel at. An adult will eat ten pounds of meat at a sitting.

six years of age, for there is no other milk and little food in the desert that they can eat. At certain seasons of the year, the sama or wild melon grows in profusion, and serves as both food and water.

Childbirth is but an incident to these women of the desert, and though they have children with surprising regularity, not many of these reach maturity, because of the scarcity and irregularity of food. The common illness is due to over-feeding, and Nature has given these children, as well as the adults, an unbelievable food capacity, as shown in Figure 3.

Generally speaking, the bush people appear healthy. Eye affections appear to be the most common disorders, but in our camp, where they had an abundance of meat to eat, they were constantly tortured from their gorging. Their greatest enemy is pneumonia, and it is invariably fatal. They avoid the areas of sleeping sickness and seem almost immune to malaria and blackwater fever.

They have little knowledge of drugs, and nothing they will reveal in regard to their cures. Whenever they have made contact, they believe in the white man's magic and prefer it to their native arts of healing.

In one instance a child was brought into camp with a severe burn. This wound was covered over with a clay, mixed with herbs and gum, and was healing nicely under this treatment. The cause of this accident was interesting. The parents had been in a drunken stupor late in the morning, from the excess of meat, and the child had crawled into the fire in search of food and water. I have found no satisfactory explanation of the effect of meat on these people, but they assuredly react as does the average American to his home-brew.

They are remarkably free from the heathenish customs peculiar to most of the African tribes, cicatization being the only mutilation commonly practiced. They appear to be free from venereal disease, a condition not common to the Kaffirs, for medical officers told me that as high as 70 percent of some of the native tribes had syphilis. This need not be debated when we consider that, for four or five hundred years, from the time of the slave traders, these negroes had been exposed, with no methods of combatting the disease, until the advent of arsphenamine, except their social customs, for in some tribes promiscuity was punished by death.



Fig. 4.—Bushwomen at the water hole; but they never go in swimming!

Though the Bushmen are unable to compute time or distance, they appear to reach at least an average age, judging by the wrinkles on their stomachs, as shown in Figure 4.

That these Masaris are primitive in the extreme is shown in Figure 6. This woman, about twenty-five years of age, came into camp with her husband, carrying her baby and two young pups. After a few days I noted that the baby, though young, was quite "strong," so I made inquiry as to when it had had its last bath. Neither the father nor mother could remember and finally admitted that the child, five months old, had never been washed; and it may safely be assumed that it is only when the seasonal rains fall that the bushmen are exposed to this element.

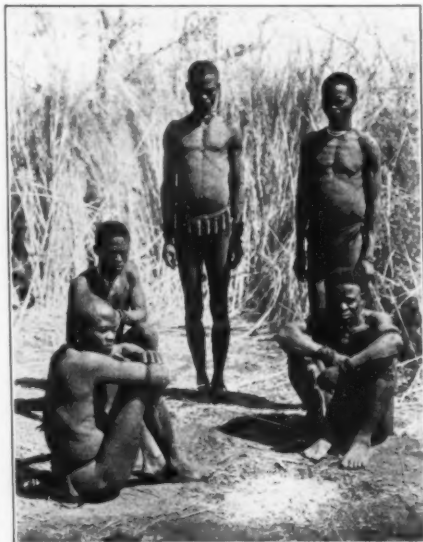


Fig. 5.—A group of Masari bushmen and a brush shelter, their usual habitation. Note how they seat themselves and try to do it.



Fig. 6.—Bushwoman feeding her baby and her pup, one at each breast. The dog will eventually help provide the meat, their only staple article of diet.

The two young pups intrigued me also, for though they had no mother dog to feed them, they always wore a contented smile and the reason is easily seen (Fig. 6). There is an economic as well as a humanitarian reason for the care of these pups, for later on they will aid her husband in tracking the wounded game through the rocky areas where he could not otherwise follow them. In the final analysis, the bushman's efforts center around the securing of meat.

Lovemaking in the desert does not appear to present any peculiar difficulties, so the primitive emotions of man—food and love, according to psychologists—are about all the worries the Bushman has.

He has a vocabulary of about 200 words, most of which are clicks and clucks, imitative of the wild life, and no white man has learned the intricacies of these as yet. He can count to but five and these only in digits; one, one and one, one and one and one, etc. Those who have studied them carefully place them on a numerical parity with the baboon. They illustrate this by stating that, if six hunters go after baboons and one hides himself in a likely place, the baboons will return; but if one drops out of a party of five, they will not come back. This appears to be conclusive. It is certain that they are not so well organized, socially, as are the baboons, who always have their

leader who keeps his outposts on constant watch to guard against the common danger of attack from the lion, leopard and wild dogs.

It was a constant cause of wonderment to me to see how a kind Providence took care of these naked bush babies and protected them from the poisonous snakes and preying animals. These youngsters are stoical in the extreme, and they wander around in the thorny bush with no word of complaint. The twenty-odd children we had around our camp did not create so much fuss or friction as would four average American youngsters, and instinctively these bush babies fared and shared alike with their mates. The parents were kind to their children and never scolded or abused them.

Despite the fact that the Bushmen are exclusively meat eaters, they do not seem to exhibit any evidence of an unbalanced diet. They appear as healthy as the Kaffir tribes in adjacent territory, who have a mixed diet of meal, meat and milk.

I paid particular attention to their teeth, and found conditions much as among our own people. Some had good teeth and some had carious teeth; some had pyorrhea and others were free from it; and I could note no difference in dental conditions between those living on meat or mixed diet.

The Bushman's two diversions are "throwing the bones" and dancing. Their "bones" are about the size of dominoes. They believe absolutely in what the "bones" tell them, and if they are going lion hunting, they want to know if they are going to get the lion or the lion is going to get them. If the "bones" do not fall right, they will find no lions for you that day.

The Bushman's dance is imitative of the jungle animals. They have the gemsbok dance, the eland dance, the jackal dance, the vulture dance. They have no musical instruments and the women furnish the accompaniment by chanting and clapping their hands. The men do the dance, which frequently lasts for hours—and they dance till they are "all in". They lie where they fall, until they are able to join in again, and they do not take time for either food or water. The music is rhythmic, but not melodious.

They worship the praying mantis—an insect about four or five inches long and resembling what we call the darning needle.

No doubt there is an economic reason for their choice for, so far as I could learn, it was the only living thing in the desert that they did not eat.

The men wear a ghee string. The women gird themselves with an antelope hide and have an extra hide in which to carry the infant on their back. Both men and women adorn themselves with beads, which they make from ostrich egg shells. They break the shells into convenient

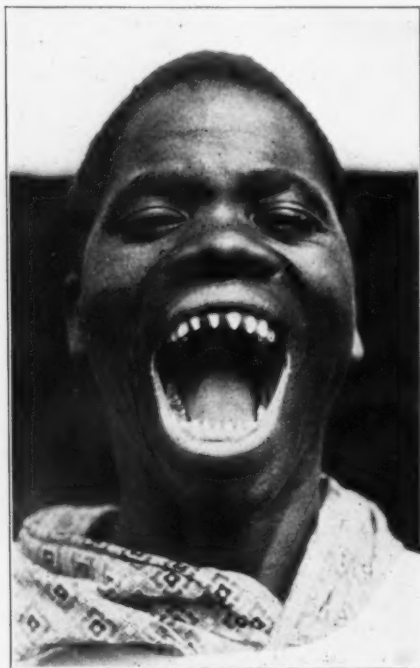


Fig. 7.—Tooth sharpening is still practiced among descendants of the old-time cannibals.

shapes and polish the pieces with sandstone rock, drilling the holes with flint arrow heads.

The complete household equipment of an average Bushman family will not exceed five pounds in weight, and like Goldsmith's villagers "Their needs are simple and their wants are few." When the game leaves their waterhole, the Bushmen store up a little water in ostrich egg shells, to tide them over to a fresh oasis in the desert, and they travel light, fast and far. The Bushman is a product of his environment and, under different conditions, would undoubtedly become a useful member of society. Happy indeed is he and rich, to



Fig. 8.—The Masakolumbo tribe on the Kafue River in Northern Rhodesia knock out the six upper anterior teeth of their boys and girls when they are ten years of age.

the limit of his conceptions, if he has a bow and arrow, a wife and a dog.

After leaving the Kalahari, we trekked north to the Belgian Congo and came in contact with natives, some of whom had



Fig. 9.—The Ba-Ila tribe bind their heads from childhood and look very grand with this protuberance decorated with the head of a crested crane or with brass upholstering tacks.

unusual and barbarous customs. As shown in Figure 7, the cannibal tribes sharpen the six anterior upper and lower teeth. Undoubtedly this must be to facilitate the practice of their profession. The boy in the picture claimed that he was not in active practice, but one cannot be too sure of anything in Africa, for things are quite different there.

The Masakolumbo tribe on the Kafue River in Northern Rhodesia knock out the six upper teeth of both boys and girls. This is part of their tribal ritual at the age of puberty. They give as the reason for this that they are not animals, like the zebra,

and so they knock out the upper teeth to prove it—all of which we must admit is quite logical.

The Ba-Ila boys have their scalps bound up from childhood, as shown in Figure 9, and when they reach adult age they have outward and upward elongations almost as large as their heads, which are their pride and joy. This may be where the "swelled head" idea got its start.

Anyone with an observant mind will find much to interest and entertain him in Africa, for it is a land grotesque, unusual and bizarre, and much remains to be seen and told.

Pyelitis in Pregnancy

By EDWARD PODOLSKY, M.D., Brooklyn, N. Y.

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PYELITIS is an inflammation of the kidney pelvis due to microbial infection. Kretschmer divides pyelitis into the following clinical groups: (1) Defloration pyelitis, or the type occurring in newly married women; (2) pyelitis of infancy and childhood; (3) pyelitis following surgical intervention; (4) simple pyelitis; and (5) pyelitis of pregnancy. Symptomatically, it is divided into the acute, subacute and chronic forms.

The pyelitis of pregnancy was first mentioned by Smellie in 1752. In somewhat greater detail it was described by Pierre F. O. Rayer (1793-1867) in his treatise on diseases of the kidneys (1837-1841). The next to call attention to this condition was Theodore Heblaut (1860-1925) who, in 1893, presented a series of careful observations on the course of pyelitis. Since then, pyelitis in pregnancy has received careful attention from obstetricians and urologists.

MECHANISM

As to the access of pathogenic bacteria to the kidney pelvis, three views are at present prominent: (1) Hematogenous, descending infection; (2) lymphogenic infection; and (3) ascending infection from the lower urinary passages.

As to accessory factors favoring infection, some writers, like Barry, believe that pregnancy has no causal relation to pyelitis, but that inflammation is set up in the same way

as in other parts of the body. The theory of urinary stasis in the ureter was first noted by Cruveilhier, in autopsies on pregnant women. The ureter was found dilated in these cases, more often on the right than on the left side. In the living, this fact has been demonstrated in the pyelographic researches of Kretschmer and Heany, and by the hydrostatic experiments of Fall, in this country, and Kaltenschnel, in Germany. The opinion of Mirabeau, that congestion of the mucosa of the bladder and ureter and the general pelvic congestion of pregnancy are in no small way responsible for a condition which predisposes to infection, is important.

Opits thinks that the frequency of right-sided disease results from a sharp kink in the right ureter, at the point of crossing the iliac artery. DeLee maintains that, because of the almost equal specific gravity of the pregnant uterus and the rest of the abdominal contents, it is extremely unlikely that the uterus produces pressure on and stasis in the ureter. Franz believes that there is some obstruction close to the pelvic brim, as the ureters are never dilated below this point, but often above it. This is further emphasized by Hirsch who, in his investigations in the Munich Institute of Pathology, found upper ureteral dilatation in about 30 percent of those who died in pregnancy or the puerperal period.

Stoeckel was of the opinion that the ob-

struction was at the points of physiologic contraction of the ureters. This seems to be an accepted view, according to Pugh¹, from an examination of many cases and pyelograms.

Hunner² found stricture of the ureter in 34 out of 35 cases. Fromme and Howard Kelly state that, along with compression of the ureter by the pregnant uterus, there is a sinking of the kidney on the right side.

In 100 cases of apparently normal pregnant women, examined in the late period of pregnancy (the 7th to the 9th months), Pugh noted that, in 80 percent of the cases, the ureters were very sluggish in their evacuation. This applied particularly to the right ureter, from which indigo carmine often appeared from one-half to two minutes later than from the left. In practically all of these cases there was ureteral retention in the abdominal ureter, mostly on the right side. After the ureter had apparently emptied itself, a catheter was inserted and from 3 to 10 cc. more urine was obtained. In this series, displacement of the bladder occurred in 26 of the pyelitis cases and in 46 percent of the normal ones.

Hofbauer³, in his etiologic studies, arrived at the conclusion that urinary obstruction in pregnant women is caused by certain anatomic conditions in the juxtavesical portion of the ureter and in the vesical trigone. Hypertrophic changes in the musculature, associated with hyperplastic changes in the connective tissues, are essential factors in the narrowing of the lumen of the lower part of the pelvic portion of the ureter. The constriction is still further accentuated by an encircling ring resulting from hypertrophy of the ureteral sheath, while engorgement of the vessels in the mucosa and dextro-rotation of the uterus may act as contributory factors. Hofbauer says that there was no demonstrable indication of an active inflammatory process or of remnants of a preceding inflammation in the ureteral wall.

A moderate degree of hydroureter is a common occurrence in pregnant women. The distal end of the ureteral dilatation usually lies at the level of the parametrium, the visible dilatation being associated with a demonstrable delay in ureteric action. The hyperplastic and hypertrophic changes in the upper pelvic portion and in the abdominal portion of the ureter are decidedly less marked, and the dilatation above the narrowed area of the juxtavesical portion occurs

as a consequence of the structural peculiarities. The hypertrophy of the trigone accounts for the clinical phenomenon of residual urine, found in the pregnant woman.

Giacotto and Raffo⁴ have found that the succession of factors which lead to pyelo-ureteral stasis in pregnancy, is as follows: (1) Atony (functional dynamic factor); (2) polyuria and histologic modifications of the pyelo-ureteral walls (biologic factors belonging to pregnancy); (3) the volume and weight of the uterus (mechanical factor).

BACTERIOLOGY

The infecting agent in pyelitis in pregnancy is usually the colon bacillus, either alone or mixed with the staphylococcus, streptococcus, typhoid, and pseudodiphtheria bacilli and proteus. In 6 out of 55 cases, Hofbauer found a definite lowering of the opsonic index of the serum toward *B. coli* during pregnancy. Among the uncommon invaders are the gonococcus, pneumococcus, *Bacillus mucosus capsulatus* and *Bacillus pyocyaneus*.

TREATMENT

Treatment of pyelitis in pregnancy may be divided conveniently into: (1) Medical; (2) cystoscopic and; (3) surgical. In cases of acute colon bacillus pyelitis, instrumental or local treatment is ordinarily contraindicated. Treatment in such cases should consist of rest and careful regulation of diet, abundance of water and methenamin, in doses of from 7.5 to 10 grains every four hours, by mouth. Proper attention should be given to the gastrointestinal tract, particularly avoiding constipation and free catharsis.

The treatment of pyelitis by drugs has been rather discouraging. A number of drugs have been recommended by various authors. The administration of sodium bicarbonate, ½ to 1 teaspoonful, well diluted, three times a day, has been tried. Salol, which has been highly praised by some, has been found to be of but little value. The one drug of some value has been methenamin, but before administering this drug the acidity of the urine should be tested and, if there is a definite alkalinity, about 10 grains (650 mgm.) of sodium acid phosphate should be given every four hours until the urine becomes acid. In some cases methenamin causes vesical irritation and hematuria; if this occurs it must be stopped, using benzoic acid instead.

Vaccine therapy has been given a thorough trial in the treatment of pyelitis, but the results have not been very good. Intravenous injections of mercurochrome have been tried, with no startling benefits. The bacteriophage works well if no reaction results, but when a reaction occurs, it is most disastrous. The use of pituitary extract has been suggested, on account of its specific inflammation-checking action, as well as for its stimulating effect upon ureteric peristalsis.

PELVIC LAVAGE

Of the various forms of treatment that have been used from time to time in pyelitis, the latest, which is the most effective, is pelvic lavage. This method of treatment consists of catheterization of the ureters, on one or both sides, depending upon whether the infection is unilateral or bilateral. Corbus and Danforth⁵ outline their regime in the treatment of pyelitis by pelvic lavage as follows:

The patient is put to bed, a mild laxative given and free ingestion of water encouraged—a glass every hour while the patient is awake. The patient is then prepared for cystoscopy. A suppository of extract of belladonna and extract of opium, $\frac{1}{4}$ grain (16 mgm.) each, is given one hour before the examination, together with $\frac{1}{2}$ grain (21 mgm.) of Pantopon, intramuscularly, one-half hour before. As both opium and Pantopon lessen pain and relax unstripped muscle, these drugs make a cystoscopic examination practically painless. At the same time the spasm of the ureter is lessened, which is always present after morphine is given. Having passed, if possible, a No. 6 F., whistle-tip ureteral catheter to the renal pelvis on both sides, in order to ascertain from which side the pus is coming, pelvic lavage is next performed on the affected side, using isotonic saline solution. This should be continued until the returned water is macroscopically clear.

This procedure will insure better drainage while the indwelling catheter is in place. While in place the catheter must be watched carefully, lest it become plugged. It is a safe procedure to irrigate the renal pelvis gently, morning and night, with isotonic saline solution. As the pelvic mucosa and ureter are already swollen and congested, the application of antiseptics only adds insult to the injury already existing.

As a rule there is marked improvement in the symptoms in four or five days and the

catheter can then be removed. At this time it is safe to dilate the ureter gently by passing a No. 7 F. bougie. If there is a return of symptoms the catheter may be again passed and left in place until the symptoms subside. A ureter that is dilated to a No. 9 or No. 10 F. will usually give sufficient drainage to permit pregnancy to continue to full term, but this is not true in all cases. A pyelographic study should not be attempted as a routine until after pregnancy has terminated. Treatment is necessary even after delivery has occurred.

Some authors, among them Pugh, believe in establishing liberal drainage at the outset. He uses as large a catheter as he can safely introduce—nothing less than a No. 8, x-ray catheter is employed. X-ray catheters are used by some because they resist the action of body fluids effectively and do not become abrasive so readily. A No. 13 catheter has been used with a high degree of success. The new McCarthy, pan-oblique cystoscope permits the use of catheters up to size No. 18.

The operative treatment is the last resort. This consists usually of pyelotomy or ureterotomy, and is necessary only in rare cases. Interruption of pregnancy is also to be considered, if the other measures employed do not bring about the desired results.

FOCI OF INFECTION

In addition to the treatment outlined, accessory treatment of the presumptive underlying causes is also necessary. A careful examination should always be made on all patients with pyelitis. The teeth should be x-rayed for abscesses, and the tonsils removed if diseased. The gastro-intestinal tract should be carefully examined.

There is a definite relationship between chronic constipation and pyelitis. Some cases of pyelitis have been cured by eliminating constipation. Various rectal conditions are, in a great many instances, the exciting factors in colon bacillus pyelitis. Antiseptic douches should be used in certain abnormal conditions of the genital tract. Surgical procedures are called for in cases of rectocele, cystocele and fibroid tumors of the uterus, as a means of preventing pyelitis.

By ordinary means of treatment, a cure can be obtained in from 60 to 70 percent of the cases. It is only in the advanced type that some radical measures are necessary. It should always be kept in mind that a tuberculous kidney is not a very uncommon

finding in pregnancy, and that the colon bacillus may often be found in the urine to mask the true pathologic condition. A careful examination of the kidney function is essential.

Many patients have become pregnant after satisfactory treatment of pyelitis, with no untoward results. If the pyelitis is quiescent and the renal function is good, the patient may continue in her pregnancy, and become pregnant subsequently, with no fear of untoward results.

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Normal Temperature, Fever and the Endocrines

By J. S. LANKFORD, M.D., San Antonio, Tex.

THE biochemistry of the temperature of the human body is a fascinating study. The normal temperature is said to be 98.2°F., but thoughtful observers know that the normal variation in different people is from 98° to 99° (in children a trifle higher than in adults), with a diurnal variation of about one degree, being higher during active oxidation of the food intake of the day. It is the reverse with night workers who eat at night.

A study of evolution reveals a gradual rise of body temperature in the various forms of life, from the reptiles, through the lower mammals to man, and with this rise increasing intelligence and action.

The temperature of the body must be maintained within certain limits or the creature perishes. Life can not long be sustained in man, with the temperature as low as 95° or above 107°F., and must, in health, range close to the normal.

Function, health, mentality and life itself demand well regulated, normal temperature. How is it maintained? For many years physiologists and other scientists have sought an explanation of heat production and control in the human body, without much success until recently. The fields of biology, physiology and chemistry were investigated with little satisfaction. Only recently has it been announced that heat regulation is maintained by the interesting chemistry of the endocrines, governed and directed by a definite heat center at the

base of the brain, operating automatically through the nerves.

It has been known for a long time, of course, that body heat is generated in the muscles, the liver and other tissues, by oxidation of blood-sugar and fats, but there has been no rational explanation of the exact process. It was known that heat was dissipated through the skin, by conduction and radiation, by sweat and evaporation, and that a considerable amount was thrown off by the lungs, and some by the saliva, the urine and the feces. It was known also, in an indefinite way, that there was a heat-controlling center near the base of the brain, but its exact method of action was not fully understood.

Several years ago, Barbour, by experimentation, showed conclusively the exact location of the heat controlling center and, further, that control is exerted through the nerves. Quite recently Cramer confirmed Barbour's findings, but in addition demonstrated by some very delicate tests, with osmic acid vapor, that the whole mechanism of temperature control of the body depends upon the secretions of the endocrines, as contended by the eminent Sajous for years before he died. Cramer proved beyond doubt that the suprarenal secretion was closely related to the regulation of the body temperature and to the increase of the leukocytes in fighting disease germs. This discovery was made accidentally, while engaged in a profound study of the activity

of cancer cells. To the physician-student, motion pictures of living, active microscopic cells are an enthralling sight.

Sajous claimed that normal metabolism is maintained by the thermogenetic action of the endocrines, and that fever is merely nature's increase of the same process, to fight disease germs by leukocytosis and in other ways. For a number of years he was studying this subject and occasionally publishing the results of his investigations. A short time before his death, having carefully reviewed and checked his researches, he published his matured views.

Normal metabolism and tissue respiration, the latter of which has been under a cloud of doubt for many years, depend, first, upon the combined secretion of the suprarenal glands—adrenalin from the medulla, and, from the cortex, lecithin and the monatomic alcohol, cholesterol. These three chemicals are carried by the red cells to the lungs, where the adrenalin combines with the oxygen in the air cells and is converted into adrenoxidase. This living chemical is conveyed by the blood stream to the tissues and there it catalyzes the lecithin, creating heat energy. The cholesterol inhibits this production of heat and might have the power to over-control it, but for the fact that the thyroid and parathyroid secretions energize the action of the catalyzing agent.

The pituitary body serves the purpose of converting chemical energy into nervous energy and of directing and governing the work of the other organs. The thymus plays an important part during the growing years. Thus nature has arranged a mechanism that maintains an even temperature of the body under ordinary conditions. When the endocrines function normally there is a perfect state of tissue respiration and metabolism. Fever is a conservative process of nature to fight disease—an exaggerated state of normal functions, designed to increase and activate the leukocytes, and to furnish them a warmer medium in which to digest the disease germs.

PHAGOCYTOSIS AND THE ENDOCRINES

When the blood is invaded by disease germs, the phagocytic fight is made by an increase in thermogenic activity of the endocrines, and this leads to a rise in temperature, in proportion to the extent and virulence of the disease, and at the same time

the heat is conserved by the drying up of the heat-eliminating organs. It makes no difference whether the entrance is through the skin, as by mosquitoes in malaria, yellow fever and dengue; by the louse, as in typhus fever; or by way of the air passages, as in influenza, scarlet fever, measles, pneumonia or tuberculosis; it is the same kind of battle. The disease germs may enter through a mucous membrane, as in diphtheria or gonorrhea, or through the structures of the gastrointestinal tract, as in typhoid fever; or it may be sepsis following surgery or obstetrics. In all acute or chronic infections causing a rise in temperature, it is always the same method and plan of combat—the thermogenetic action of the endocrines.

Fever, therefore, is a beneficial process and, if it remains within reasonable bounds, should not be fought strenuously, but should even be fostered, under certain circumstances, particularly where there is pluriglandular inefficiency.

The endocrines must now be seriously considered in the treatment of fever, regardless of the cause. This is, indeed, a great advance in medical opinion, and the evidence indicates that it is not radical, but will stand the test of time.

All of us, in the light of this new information, can think of fatal cases of pneumonia, with subnormal temperature, among the children of the slums of large cities, that might have been saved by adrenal support; or of the profoundly depressed typhoid fever patient, dying in delirium and coma, but with little or no rise of temperature, who needed epinephrin. Many such striking examples might be recalled. Where there is a decided under-functioning of the suprarenals or well defined myxedema, the necessary remedy is very clear—epinephrin or thyroxin. Where it is known or suspected, from general indications, that the fever patient is a chronic sufferer from hypoadocrinism, certainly support, in the way of suitable organotherapy, is very essential.

Over function should be considered also. Hyperthyroidism will tend to increase the degree of fever, and is controllable by Lugol's solution in small doses, or by Theominal. Hyperadrenalism, tending the same way, calls for such corrective measures as small doses of mercury or of pancreatic substance, which have a controlling effect over hypertension and infections.

In treating diseases attended by a rise of temperature, it is not wise to interfere with the fever by ordinary febrifuges, when the temperature is moderate. It is better, so far as the fever is concerned, to leave it to nature's corrective work to restore the balance. The virulence of the infective agent, however, may cause too great a thermogenic action and the temperature may rise to a point where danger of hemolysis or autolysis arises. When the temperature is above 103°F., active treatment to control fever becomes necessary, in order

to save the blood and to promote recovery. It may be permissible to make a suggestion here; that is, that we give less of the coal-tar derivatives, which depress the heart and embarrass the functions of the organs of internal secretion, and get back to such simple remedies as tincture of aconite, sweet spirits of niter, spirits mindererus, small doses of calomel, and water and more water. It would be safer.

The future will reveal much of interest concerning the relation of the endocrines to body temperature.

The Overlapping Specialties

Edited by GEORGE B. LAKE, M.D., Chicago

THE gradual multiplication of specialties in Medicine has been going on for more than a half-century, as the field of scientific knowledge, applicable to the care of the sick, has broadened. It is, today, impossible that any one human being should be equally conversant with the immense number of facts now available in the various branches of medical practice or equally expert in the immense variety of technical procedures now employed.

Some people feel that medicine is too highly specialized at present; while others think that certain other specialties should be officially recognized, such as andrology (the care of diseases of men—analogueous to gynecology), geriatrics (the care of aged persons—analogueous to pediatrics) and syphilology.

Some of the recognized specialties are perfectly clean-cut. A patient with a rectal disease should be referred to a proctologist; one with cataract or a pterygium, to an ophthalmologist; one with a suppurating middle ear or deviated septum, to an otolaryngologist; a pregnant woman to an obstetrician.

But how about a woman with syphilis? Should she be sent to a urologist, a dermatologist or a gynecologist? Should a child with kidney disease be treated by a urologist, a pediatrician, or by whom?

A number of such questions occurred to me or were suggested by others, until I decided to see what some of the men of importance in the lines of work involved thought about the matter.

The official Directory of the American

Medical Association classifies the special societies in these groups:

Surgery, Gynecology, Obstetrics and Anesthesia.

Ophthalmology, Otolaryngology and Rhinology.

Dermatology and Urology.

Pediatrics and Internal Medicine.

Neurology and Psychiatry.

Pathology, Bacteriology and Anatomy. Roentgenology.

They also list the following specialties:

Surgery	Neurology
Obstetrics	Psychiatry
Gynecology	Tuberculosis
Proctology	Anesthesia
Ophthalmology	Roentgenology
Urology	Pathology
Dermatology	Bacteriology
Pediatrics	Public Health

Obstetrics and Gynecology

Orthopedic Surgery

Otolaryngology, Rhinology

Ophthalmology, Otolaryngology, Rhinology

Neurology and Psychiatry

Clinical Pathology

After some thought I formulated the following questions:

1.—Should a woman with a severe case of syphilis be sent to a gynecologist, a urologist, a dermatologist, or to whom?

2.—If a woman has a severe kidney condition, should she be referred to a gynecologist, a urologist, or to whom?

3.—Should a woman with a tumor of the bladder be treated by a gynecologist, a urologist or a general surgeon?

4.—Should a man with a severe case of syphilis be treated by a urologist, a dermatologist, or by some other specialist?

5.—Should a boy or girl with syphilis be sent to a pediatrician, a urologist, a dermatologist, or (in the case of a girl) a gynecologist?

6.—Should a child with kidney disease be treated by a pediatrician, a urologist, or by whom?

7.—Just what does the specialty of urology embrace?

8.—Should there be a recognized specialty devoted solely to venereal diseases? And, if so, should it deal with men, women and children so diseased?

9.—Should there be a recognized specialty of andrology, dealing with diseases of the male reproductive organs, as distinguished from the urinary organs?

10.—Does the field of pediatrics embrace urology, oto-laryngology, neuro-psychiatry, etc., as applied to children?

I then sent questions 1, 2 and 3 to several recognized gynecologists; questions 5, 6 and 10 to several pediatricians; questions 1, 2, 4, 5, 6, 7, 8 and 9 to several urologists; and questions 1, 4 and 5 to several syphilologists—for though this specialty is not listed in the Directory a number of prominent men are devoting their attention to it.

The replies to these questionnaires were not very numerous, but some of them are decidedly interesting and informative, and I shall embody them here.

GYNECOLOGISTS

Dr. Howard A. Kelly, of Baltimore:

1.—I would send a woman with a severe case of syphilis to a syphilologist, of whom there ought to be one or more in every large city. Some urologists and some dermatologists are thoroughly competent to treat syphilis throughout, but they cannot compare with the specialist in handling a disease with such protean manifestations and often so baffling, particularly in its later course.

2.—It depends entirely upon the kind of man available in gynecology and urology. Such a gynecologist as Dr. Guy L. Hunner here (and I trust, with my own large experience, I may mention myself) is better able to handle all bladder diseases in women than is the average urologist; but there, too, there are notable exceptions.

3.—A woman with a tumor of the bladder should be treated either by a gynecologist, if he is competent in urinary diseases, or by a urologist, or occasionally by a general surgeon who has strong urological predilections.

Dr. Joseph B. De Lee, of Chicago:

1.—A woman with a severe case of syphilis should ordinarily be sent to a urologist or, for second choice, to a dermatologist.

2.—If a woman had a severe kidney condition she should be sent to a urologist.

3.—A woman with a tumor of the bladder should be treated by a gynecologist, if he has the proper training; otherwise by a urologist.

Dr. F. D. Hollenbeck, of Chicago:

1.—A woman with a severe case of syphilis should be under the care of a dermatologist.

2.—If a woman had a severe kidney condition, she should be treated by a urologist, if the disease were surgical, or by an internist, if it were medical. This would have to be decided upon the specific findings in the individual case.

3.—Tumor of the bladder, in a woman, should be treated by a urologist.

THE UROLOGISTS

Dr. William T. Belfield, of Chicago:

7.—The specialty of urology embraces diseases of the urinary organs, in both sexes; diseases of the genital organs, in the male; and venereal diseases.

I believe that statement covers all the other questions submitted.

Dr. Harry Culver, of Chicago:

1.—A woman with a severe case of syphilis should be sent to a urologist or a dermatologist.

2.—A woman with a severe kidney condition should be treated by a urologist.

4.—A man with syphilis should be sent to a urologist or a dermatologist, as specialists of these two classes are most familiar with the treatment of this condition.

Should some special organ, such as an eye or the nose or throat, be involved, then some man from this department should be associated in the management of that particular patient.

5.—Syphilitic children should be referred to a urologist or a dermatologist as few pediatricians are thoroughly familiar with the management of this infection.

6.—The treatment of a child with kidney disease depends upon the type of condition present. Should it be a case of nephritis or any other medical kidney condition, it should be handled by a pediatrician; should it be a case of pyelitis or surgical kidney, it should be handled by a urologist. In many instances, however, mild renal infections can be properly dealt with medically.

7.—Urology embraces all diseases associated with the organs of the genitourinary tract, excepting certain medical kidney diseases, in men, women and children.

8.—Certain men calling themselves urologists treat nothing but venereal diseases—not, however, by their own choice, in most instances. These could properly be called *venereologists*, and are so recognized unofficially.

9.—Diseases of the male genitals are embraced under urology.

Dr. E. G. Ballenger, of Atlanta, Ga., answered these questions and followed with a very interesting discussion.

1, 4 and 5.—Syphilis, occurring in men, women or children, should be treated by a genitourinary specialist.

2 and 6.—A woman or a child with a severe kidney condition should be treated by a genitourinary specialist.

7.—Urology embraces diseases of the urinary organs, from the kidneys to the meatus, inclusive, in men, women and children.

8.—In my opinion there should not be a specialty devoted solely to venereal diseases.

9.—Andrology deals with the lower urinary organs, in man, and so is included in urology. I do not believe there is a place in our scheme of things for such a specialty as andrology.

Discussion

You bring up some interesting questions regarding the reference of patients with venereal diseases. There are, of course, two sides to this subject and naturally my view will be based upon my ideas and experiences in genitourinary diseases and in syphilis in the past 24 years, during which time I have limited my work in these conditions, and it seems advisable to give you my reasons for making the answers to your questions.

When I began my special work, and for many years later, urology and venereal diseases, including syphilis, were regarded as closely allied and, at that time, most of the books on genitourinary diseases also included syphilis.

The majority of patients with lesions on their genitals which, at the beginning or later, are found to be syphilis, are inclined to go to or to be referred to medical men limiting their work to genitourinary diseases, because the genitals are the parts affected. The most important thing that can be done for a patient with a lesion, at this time, is, not to cure the sore, but to make correct diagnosis so that, in case it is lues, treatment can be started at once. It is generally conceded that adequate and prompt treatment gives a larger percentage of cures than later, when the organisms have become more deeply entrenched.

Since the men who limit their work to genitourinary diseases are probably as expert as any group of specialists in finding the *Spirocheta pallida* and in making differential diagnoses, as well as in treating the lesions and in giving the requisite subsequent observations to determine if the treatment has been sufficient, it would seem that the wellbeing of the patient is conserved by his being diagnosed and treated by the men who limit their work to genitourinary diseases.

Since gonorrhea with its complications and sequelae, is so closely aligned with the urologic lesions not caused by it, it has appeared to me illogical for the urologist not to treat Neisserian infections, and for the men treating venereal diseases not to be able to treat urologic conditions and infections which are non-gonorrheal. Here, again the differential diagnosis is not infrequently important.

It is well recognized that gonorrheal infections of the cervix uteri and fallopian tubes can often be eradicated by non-surgical measures. The gynecologist is generally less willing to employ the slower medical measures than is the genitourinary specialist; and so, are not a larger number

of patients cured without operations by the latter? and is it not ultimately better for the patient when such is possible?

Are not urologic and genitourinary affections in children, and the underlying principles of their treatment, sufficiently similar to those in adults to be better treated by the men limiting their work to this field than the pediatricians, who are less familiar with these diseases?

Are there any specialists more proficient in making the renal functional tests, and in the management of kidney diseases, than are the genitourinary specialists, who have to study carefully the old men with prostatic obstruction and "coddle" them through the danger period following prostatectomy? If not, why are not the men who make this a specialty, and who are seeing many such patients, capable of taking care of the woman with severe kidney conditions?

Furthermore, from a social standpoint, if all the patients with venereal diseases are treated by one group of men and all other urologic conditions be treated by another, will not patients with venereal diseases feel that their reputations are being jeopardized by being seen in the offices of the men doing only venereal work, who presumably could render the more efficient service? Would not the result of such a plan, therefore, tend to make the patients so treated feel that they are to be surrounded by a cloud of suspicion, which, for married men or those prominent in their communities, sometimes may look as black and ominous as a tornado cloud? Otherwise, they must be treated by the general practitioner or general surgeon, thus perhaps, to some extent, jeopardizing health and increasing the danger of accidental or other infections, in order to keep their reputations from being damaged. If, however, they can be treated by a man whose work includes non-venereal conditions, there will be a sufficient number of patients being treated for non-venereal urologic conditions, so that the patients with venereal diseases will escape the humiliation, actual or imaginary, which they would feel if they were in the hands of an exclusively venereal specialist.

These, I take it, are adequate reasons for urologists to treat venereal diseases, as even the most high-brow ones often do, clandestinely; and, conversely, they seem equally good reasons why the venereal specialists should treat urologic affections.

I am fully aware of the argument which can be presented by the men who insist that urology should be divorced from venereal diseases, in order to maintain the high standard required for renal diagnosis, urologic surgery, etc.

We should not, however, lose sight of the fact that urology has made scientific progress as rapidly, at least, as has any specialty, in spite of the so-called handicap which is claimed by a few to result when urologists treat venereal diseases.

The primary object of medicine and surgery, in all its branches and specialties, is to help mankind, and, from many years of observation, it is my opinion that the greatest good to the greatest number is accomplished by the alignment, not the separation, of venereal diseases from urology. Adequate training in both is requisite, but it in no way requires an excess of work for the well-trained medical man to learn

enough to render efficient service in both of these closely allied groups of affections. The more one studies the subject from a practical standpoint the more one is impressed with the intimate interlocking relationship of the factors involved.

It is hoped that the above discussion will be construed, not as prompted by selfishness, for my work is both well established and adequate, nor as an effort at boasting, but rather in the spirit in which it is written; namely, as sincere opinions based upon many years of work in this field which brings us so close to the social and medical side of human affairs.

THE SYPHILOLOGISTS

Dr. Jay Frank Schanberg, of Philadelphia, was the only syphilologist (he is also a dermatologist) who replied to the questionnaire, and he did so in a valuable discussion:

If a man has a severe case of syphilis, he should be sent to the physician best qualified to treat him. This will vary in different cities and in different institutions. Syphilology is, more and more, in this country and abroad, becoming indented with dermatology, for the reason that the early manifestations are cutaneous, and it requires a man skilled in the diagnosis of skin diseases to make the proper differentiations. One cannot rely, to the extent of one hundred percent, upon the Wassermann test, and clinical experience is an asset of decided value. In many of the universities of this land and abroad the dermatologist is an expert in syphilis.

The weakness of treatment in the past has been that there has not been a sufficient continuity or systematization of the treatment. Syphilitic patients require a systematized treatment over a long period of time, in order to give them the greatest assurance of cure. With such treatment the liability to subsequent local or focal disease becomes less and less.

It is obvious that no man is qualified to treat all of the aspects of syphilis. The syphilologist, no matter how skillful, is not warranted in treating a syphilitic iritis; but the man who is an expert in syphilis should be qualified to treat the early and possibly the late aspects of visceral syphilis, and also neuro-syphilis, if it develops. The most important treatment of visceral and neuro-syphilis is preventive treatment, and this is to be brought about by early, vigorous and systematic therapeutic methods.

If it should happen that, in any particular community or institution, the urologist is better qualified to look after syphilis, from the beginning to the end, then he should be the individual to whom the patient should be sent. The question is really one of skill, knowledge and experience, rather than of the particular department of medicine which the physician represents. The urologist, today, is in considerable part a surgeon, operating on the kidney and genito-urinary

tract. In most instances he will probably be found not to be so conversant with all of the aspects of syphilis as is the qualified dermatologist.

The most creative work in syphilology, both here and in Europe, has been done by the dermatologists and not by the urologists.

This reply covers the situation with respect to syphilis in women and congenital syphilis. In the latter two instances the assignment of such cases to properly qualified dermatologists is, to my mind, even more imperative. I know but few gynecologists who have made any comprehensive study of syphilis as a disease. There are, it is to be admitted, some few pediatricists in this country who have given much study and time to the treatment of congenital syphilis, and probably in such instances they might be better qualified to treat congenital syphilis than their particular dermatologic colleagues.

THE PEDIATRICIANS

Dr. A. G. Helmick, of Columbus, Ohio:

5, 6 and 10.—To my mind, the pediatrician is a *general practitioner*, limiting his work to children. He is supposed to realize his limitations, but to treat anything coming within his confines.

Dr. John A. Graham, of Chicago:

5, 6 and 10.—The field of pediatrics embraces urology, oto-laryngology, neuro-psychiatry and the other special branches, as applied to children.

A child with syphilis or a kidney condition should be treated by a pediatricist.

Dr. I. L. Sherry, of Chicago (a general practitioner, giving special attention to diseases of children):

5.—The child with syphilis should be treated by a pediatricist. The services of a dermatologist are required only for certain *nonspecific* skin diseases; and those of a gynecologist or urologist, only for surgical conditions.

6.—A boy or a girl with kidney disease should be treated by a pediatricist. The urologist should be called in if the condition becomes surgical.

10.—The field of pediatrics embraces all medical diseases of children, no matter under what specialty they would fall if the patient were an adult. The pediatricist is not, as a rule, qualified to undertake extensive surgical procedures.

Having presented these various interesting discussions, the question of the overlapping specialties is not yet settled beyond cavil, but the opinions of these men should clarify our ideas and make it easier to select the proper specialist, when a case is found to be beyond our powers and it becomes necessary to call for expert assistance.

700 Cass St.

THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)

GEORGE B. LAKE, M.D. (Medicine)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 9 (SURGICAL)

Presented by Dr. Max Thorek, Chicago
(See CLIN. MED. AND SURG., Aug., 1929,
p. 573)

Recapitulation: A married woman, 40 years old, a stenographer, showing no signs of disease and with a negative Wassermann test, sustained a fracture of the left humerus, at the middle. This was treated by a physician.

Eight weeks later there was no bony union; the fragments were freely movable

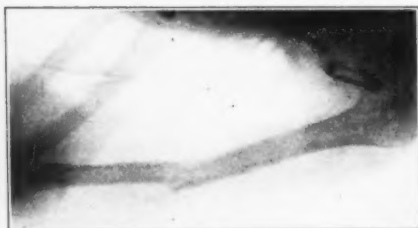


Fig. 1.

(the positions are shown in Fig. 1); and complete paralysis of the radial nerve was present.

Requirements: Give treatment and prognosis.

DISCUSSION BY DR. J. O. RUSH,
FORREST CITY, ARK.

This situation is serious. A stenographer with an ununited fracture of the humerus and radial paralysis is in a bad way.

Since the Wassermann test is negative and there are no other evidences of general physical abnormality to interfere with healing, it seems probable that some of the soft tissues have intervened between the fragments and have prevented bony union; also that the radial nerve, which here lies deep, has been severed or lacerated by sharp edges of bone at the time of injury.

Relief of the disability will probably require cutting down on the bone, removing intervening soft tissues, freshening the ends and fixing them in place. At the same time, the injured nerve should receive attention. This is no job for a novice, but requires much skill and rigid asepsis.

DISCUSSION BY DR. EDWARD L. SPITZ-
NAGEL, ROCHESTER, N. Y.

I believe this case of ununited fracture of the humerus is, unquestionably, a surgical one at the present time.

The paralysis of the muscles supplied by the radial nerve may be accounted for in this way: Certainly there has been a severe contusion produced to this nerve. The nerve may be severed; it may be caught in the callus; it may be obstructed by the bony fragments or scar formation, all of which may cause paralysis and can only be disclosed by open operation.

An incision is made and the bone inspected; such tissues and nerves between the fragments are removed as may be found there; any injury to the nerve is repaired; the ends of the ununited fracture should be freshened and irritated, because we need

stimulation of bone production; the ends are approximated and fastened together by means of plates, pins or wires, as may be chosen; the wound is then closed in the usual manner.

The arm should be supported; surgical care given to the wound; and all the usual after-fracture care attended to. Cod-liver oil or irradiated ergosterol may be given the patient routinely, as a tonic to bone formation. Under such a regime, the prognosis appears very favorable.

DISCUSSION BY DR. THEO. H. MADAY,
CHICAGO, ILL.

In looking over the facts in the case of the humeral fracture, I should go about the case as follows:

Anesthetize the patient and, under fluoroscopic view, set the fractured ends together, grating them a little before complete setting to break up any scar tissue that may have formed and thus have fresh edges to approximate; then place the fractured arm in apposition splints, because it would give the patient at least the forearm, from the elbow to finger tips, for some motion and also allow for diathermic and faradic stimulation of the radial nerve in that position.

The proper setting of the fractured ends would also, I believe, release the pressure on the radial nerve, which would then regenerate. The forearm being free, we would have part of the extremity left to manipulate by massage and the faradic current, applied to the paralyzed muscle groups below the elbow. By taking a fresh x-ray picture of the fractured portion every week and noting the progress of healing, we could start massage and faradism there as soon as possible.

In addition, I believe that about 20 drops of viosterol, with parathyroid extract, 1/10 grain (6.5 mgm.), three times a day, would aid in rapid healing.

DISCUSSION BY DR. C. B. BARBER,
FELICITY, OHIO

While delayed union in fractures of the shaft of the humerus is not so unusual, I do not believe conservative treatment is indicated here for the following reasons:

1.—After eight weeks the muscles and soft parts would be so contracted or stretched that satisfactory reduction by means of traction and fixation would be very difficult, if not impossible.

2.—The radial nerve should show some signs of returning function in two months,

which it does not do; so the nerve should be exposed and the ends sutured.

3.—The patient has already lost eight weeks and should accordingly be given the advantage of as short a period of disability as possible.

It would seem that the "step cut" operation would be appropriate here, the fragments being approximated and sutured with wire. The arm should then be abducted and splinted, preferably with a plaster of Paris cast, combined with a shoulder spica.

Passive movements of the shoulder and elbow should be undertaken after 2 or 3 weeks, the cast being split and removed temporarily for this purpose.

The paralyzed muscles of the wrist and hand should be protected from over-stretching by means of a cock-up splint. Massage and electric treatment will help in restoring function and should be begun as soon as practicable.

DISCUSSION BY DR. THOS. A. LOWE,
SOUTH ST. PAUL, MINN.

This would be my procedure in this case:
1.—General anesthetic.

2.—Open operation for nerve repair. (Even an unnecessary operation, with good technic, would not necessarily alter recovery).

3.—At the same time, reduction of the fracture and the application of a Thomas splint, using adhesive tape on the inner and outer surfaces of the forearm, in such a manner that the elbow can be given passive motion if desired, and also that sufficient extension is obtained to keep the broken fragments of the bone proximated; coaptation splints are used if needed.

A wound from the open operation is dressed as any other incision. The patient is kept in bed throughout the course of treatment.

4.—X-ray examinations to check up progress and healing.

5.—Massage and passive motion, as in any other fracture.

6.—Nourishing diet, along with, possibly, calcium and cod-liver oil, may be of help.

DISCUSSION BY DR. E. C. JUNGER,
SOLDIER, IOWA

By all means cut down on that fracture, freshen the ends of the bones, plate if necessary and put up in a good case at about a 45° angle. This should give her union in due time.

Build up the patient by sunlight and fresh air, raw vegetables and fruits and probably a little thyroid substance.

The paralysis, if due to pressure, will probably clear up when the nerve is freed from callus or adhesions. If due to tight splints, the outlook is not, of course, good.

DISCUSSION BY DR. L. R. BARNUM,
OAK PARK, ILL.

The unfavorable results so far shown in this case may be partly excused by the fact that ununited fractures of the humerus are more apt to occur than with any other bone. However, there is evidence that there was lack of skill and care or poor cooperation on the part of the patient in the handling of this case.

In view of the fact that the patient is otherwise healthy and that she is in need of the use of the arm and hand in her means of livelihood, my advice is an open operation on the bone.

After removing the callus formation and approximating the ends of the bone, a bone plate may be necessary to maintain position. This would be determined by the conditions present. A suitable case and careful treatment after operation should bring about a good union.

I should not feel justified in promising the patient a complete recovery from the paralysis, as it is going to depend on what injury has been done the radial nerve as to how much relief she will get when the operation is done. The nerve may have been completely severed, very badly contused or is enclosed in some of the callus formation. If it had been determined that the radial was severed at the time of injury, an open operation to suture the nerve should have been done then. If the nerve is enclosed in the callus and is injured in no other way, complete recovery may be expected over a period of time. Galvanism may be helpful.

SOLUTION, BY DR. MAX THOREK, CHICAGO

Dr. J. O. Rush states in discussing this case that "this situation is serious." Of course it is! He justly points out, "A stenographer with an ununited fracture of the humerus and a radial paralysis is in a bad way." With this also we will agree. He divines that there must be some interposition of soft tissues between the fragments of bone, that have prevented bony union, and that the radial nerve has, in all probability, been injured. He suggests surgical intervention. I am glad to note his

emphasis on the sentence, "This is no job for a novice."

We now hear Dr. Edward L. Spitz-Nagel's comments. He rightly analyzes the situation and tries to point out that, no matter what caused the injury to the nerve, there is only one thing to do and that is to expose it and treat it surgically. Read his comments and then compare them with the operation that had been performed. You will then see the similarity of thought between the writer and the discussant.

Dr. Theo. H. Maday, seems to place a great deal of reliance on the various forms of electrical currents and suggests a rather mild and conservative course of procedure.

Dr. C. B. Barber summarizes the situation admirably and follows close in line with what the others have to say. He speaks like

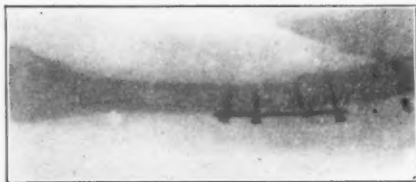


Fig. 2

a man who has had a great deal of experience in handling conditions such as are under discussion. He is closely seconded in his general deductions by Dr. Thos. A. Lowe. To hit the nail on the head, our good friend, Dr. E. C. Junger emphasizes the points of the previous discussants.

You will observe that all of the discussants, including Dr. L. R. Barnum, who is, however, not so enthusiastic, are strongly inclined to give a good prognosis in this case and that the treatment, with some suggested modifications, is practically the same.

Now let me proceed to describe the *modus operandi*, and what the results obtained thus far have been.

The patient was anesthetized. The first step consisted in carefully isolating the radial nerve. The nerve was found interposed between the two fragments of the fractured humerus, displaced and considerably traumatized but not torn. A gauze sponge was wrapped around it and it was displaced outward and kept saturated with salt solution (compress) during the operative procedure.

The tissues interposed between the fragments were liberated, the bone ends approximated and a Lane plate inserted to keep

them in place. (See Fig. 2). The superimposed structures were then sutured over; the nerve was repositioned in its proper place; the skin was closed by clips; and the arm immobilized in splints. The wound healed by primary union. An x-ray picture, taken three months later, showed perfect apposition with apparent satisfactory, though



Fig. 3.

meager, callus formation. (See Fig. 3). Passive motion at the elbow joint and gentle massage over the operated area were started as soon as it was safe to do so, and the general outline of treatment was carried out as agreed upon by all the discussants.

One would think that, with primary union after the operation, with apparently perfect result, as shown by the x-rays, complete recovery should eventuate, as prognosticated by all. But if we all should give such a prognosis as this, to the relatives and to the patient, we should be disappointed, because, at the end of five months, the fracture, while apparently united, as shown by the x-ray pictures, is not as yet completely solidified. The recovery of the nerve and its functions is, despite the electrical therapeutic methods instituted, minimal. In other words, after about seven or eight months, with one exception, the result that we all predicted has not been obtained. The patient at the present writing is still unable to use her arm and her progress is slow.

Of course, we all know that regeneration of nerve tissue is a rather slow process. I am inclined to believe that some endocrine disturbance is at the bottom of this ineffectual callus formation. The nerve recovery is still a problem, in my mind, yet I feel that, with the methods suggested, which are being carried out, a gradual restitution should be looked for.

The great object lesson from this problem is: Let us be guarded in our prognosis in this class of cases; let us promise the patient that we will do all we possibly can and never be put on record that we promised definitely that the patient will be able to resume his work at a definite time.

However disappointed we all are to find that our prognosis did not materialize, in this case, so far as the function of the arm is concerned, yet to sift the entire discussion down, the treatment suggested was practically the same and the opinions as to prognosis were the same. The first was evidently right; the second wrong. If nothing else was learned from this case but caution in formulating a prognosis, a great deal has been accomplished.

The further therapy in this case will have, naturally, to be directed to the improvement of those factors which contribute to osteogenesis. The Wassermann test is negative, the blood calcium is being studied and the ovarian functions being looked into. Whatever endocrine disturbance is discovered in the course of our further examination, we will endeavor to rectify by proper endocrine therapy. At the same time, we will keep in mind the great importance of the methods suggested in the discussions of this paper, and we shall look forward to the desired result.

PROBLEM NO. 10. (SURGICAL) PRESENTED BY DR. MAX THOREK, CHICAGO

A man, thirty-three years of age, was admitted to the hospital acutely ill. The family history was negative.

About a week prior to his admittance to the hospital he became ill, with anorexia, pains in both legs and headache. A day or two prior to coming to the hospital the pain localized itself in the right, lower abdominal quadrant. He was vomiting and had been constipated since the disease started.

Upon admission his temperature was 100°F.; pulse 98. There was distinct tenderness at McBurney's point; but there was also some sensitiveness throughout the entire abdomen. His leukocyte count was 9,000; Wassermann test, negative; urine negative. There was nothing abnormal in the chest. A diagnosis of acute appendicitis was made and operation advised.

Upon opening the abdomen, the peritoneum and bowels were found somewhat injected; the appendix was retrocecal and plastered down by a Jacksonian membrane. The operative procedure was uneventful and primary closure was made.

At the operating table, the diagnosis of retrocecal, chronic appendicitis, with acute exacerbation and chronic gastroenteritis was made.

(Continued on page 751)

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

"H.M.C." and Pituitary Extract in Obstetrics

THE analgesic compound for hypodermic injection, known as "H. M. C."—hyoscine hydrobromide, gr. 1/100 (0.64 mgm.); morphine hydrobromide, gr. 1/4 (16 mgm.); cactoid, gr. 1/60 (1 mgm.)—and pituitrin (pituitary extract) have been of great assistance to me in the practice of obstetrics, and of even greater help to the more than 500 mothers upon whom I have used them to relieve suffering and shorten the time of labor.

Many physicians decry the use of these preparations, but I have never seen a case where there was any dangerous or serious result, possibly because I use them with judgment, and do not give them too soon nor in too-large doses.

Never give the "H. M. C." until a careful, digital examination has shown that labor is actually in progress—pains every 15 to 30 minutes and growing stronger and the os uteri well dilated or dilatable. Then, if it is a head presentation and the patient is suffering severely, I dissolve one tablet of "H. M. C. No. 1," in about 0.5 cc. of boiled water, to which is added, by drawing into the barrel of the syringe from the ampule, 1 cc. of pituitary solution, and give half of this mixture, subcutaneously, in the arm. If, after 30 minutes, the pains seem to lag, I inject the other half of the mixture.

By this method the patient is drowsy and awakes only with the pains, which are somewhat less frequent, but stronger.

If labor is not completed in half an hour, but the head is engaged in the pelvis, I apply forceps and use gentle traction, with strong pressure, when the pains come on.

If much resistance is encountered, I have one of the attendants (usually a helpful neighbor, in country practice) give chloroform, by pouring a dram of the anesthetic into a folded handkerchief, which is held in the closed hand. As strong pains come on, the hand is held 2 or 3 inches from the patient's nose and opened enough so that she can get several good inhalations of the chloroform, which is removed as soon as the pain begins to subside. Surgical anesthesia is never permitted. In this way an uncomplicated forceps delivery can be done, without danger to the mother or child.

No more "H. M. C." or pituitary solution is given, after the two doses I have described.

Experience with this method will increase the physician's confidence in its use, but must never make one careless about watching all conditions constantly, in order to detect early danger signals and take measures to assure safety.

Many of these patients require only the first half of the dose originally prepared. The shorter and easier the labor, the less is needed. That is why so many see ill effects: They give more of the drugs than will be neutralized by the pain, and the excess causes a long sleep and, possibly, depression in both mother and infant.

In caring for these cases I am very careful to have my hands thoroughly disinfected before I touch the parturient canal, and to keep them so by immersing them in some antiseptic solution before every subsequent contact. Any instruments used are always thoroughly boiled. By this method I have,

so far, avoided puerperal infections entirely, although I have often worked where the conditions were extremely dirty and squalid.

The practice of obstetrics, under the circumstances encountered in many rural districts in this country, calls for skill, resourcefulness and an attention to details far greater than are needed by those who work in hospitals with every facility and trained assistants always at hand; but such work, when successfully done, offers large rewards in personal satisfaction and the gratitude of those one has helped through terrible hours.

J. R. SMITH, M.D.

Warsaw, Mo.

Pituitary Extract in Labor

IN GENERAL I quite agree with Dr. MacArthur (see CLIN. MED. AND SURG., June, 1929, p. 408), when he says that 0.5 cc. of pituitary extract is a sufficient dose to give in the third stage of labor.

It has, however, been my experience that a patient whose uterine contractions will be insufficient to bring her child into the world, gives evidence of that fact during the second stage of labor, in most instances.

It has been my custom, during the past few years, not to wait, in such cases, until the third stage of labor, but, at the middle of the second stage—when the cervix is about half dilated—to begin injecting 3 minims (0.2 cc.) of pituitary extract every 40 minutes. When full dilation has taken place in a multipara, I give 0.5 cc., which is usually sufficient to complete the delivery.

C. O. LAWRENCE, M.D.

Calera, Ala.

[Dr. MacArthur's plea was against the indiscriminate and routine use of pituitary extract in obstetric cases, which is all-too-prevalent in the practice of certain physicians.

The indications for this drug are absolute or relative uterine inertia, in a patient whose pelvis has been found, by careful measurements, to be large enough to permit the passage of the child she is carrying, after the infant's head has engaged in the upper strait of the pelvis.

Dr. Lawrence appears to be studying his cases carefully, so, if inertia is evident in the second stage of labor and the other indications are present, it would be foolish

to criticize adversely his use of pituitary extract at the middle of that stage.

Pituitary extract is a powerful substance and, like other powerful substances, should be administered only when the physician has a definite idea of the results which are to be produced.—Ed.]

The Prevention and Treatment of Cancer*

THE major cancer problem of today, as it affects the rank and file of the medical profession and interested lay organizations, is not its cause or cure, but is one of public education—to disseminate the essential known facts that pertain to its incidence, increase, frequency, early signs and symptoms, prevention and cure.

Some of the essential known facts that people must learn are:

1.—Cancer is one of the most common causes of death and the most fatal disease of modern civilization. According to the latest census, 103,000 people die of it in the continental United States each year. At the present rate 1 in every 10 adults now living is destined to die of it. The total number now suffering from it in the United States is about 300,000.

2.—According to the foremost authorities on the subject, cancer is steadily on the increase at the rate of $2\frac{1}{2}$ percent per annum, an increase of 25,000 in a decade.

3.—Cancer may attack any organ or tissue in the body, but it has a predilection for the stomach (over 30 percent), the female genital organs—chiefly the uterus—(about 25 percent) and the female breast (about 16 percent). In about 70 percent, then, these three regions are first involved. The peritoneum, intestines and rectum are attacked in about 14 percent, the skin in about 3 percent and the mouth and lips, chiefly in the males, in about $3\frac{1}{2}$ percent of cases.

4.—Cancer occurs at points of chronic irritation, in ulcers, scars, pigmented moles, incident to irritation from defective teeth and in lumps such as may have been present for years in the breast, the thyroid gland, the uterus and elsewhere. If such areas and lumps are removed, cancer can not develop in them. This is the sense in which cancer can be prevented.

5.—Cancer is an abnormal growth of the cells of the tissue in which it originates

*Reprinted from *Bul. Chicago M.S.*, Mar. 23, 1929.

and at first is localized to a small area. If this local growth is completely removed or destroyed a cure may be expected.

6.—The growth spreads and usually extends early to the lymphatic glands. It is therefore usually necessary to remove these glands, as well as the original growth.

7.—As a rule, and often very early, it spreads to distant parts. It is then absolutely impossible to remove all the growth.

8.—Because cancer usually spreads rapidly and may involve distant parts at any time, early treatment is of the utmost importance.

9.—In order that the patient may present himself early he must know the early symptoms and signs.

10.—The early symptoms and signs are similar to those of many other disease conditions. Every adult must therefore consider the possibility of cancer in connection with persistent symptoms of any kind that are not due to obvious causes, and should consult a competent physician at once for diagnosis. When this is done it will be found that nine-tenths of the people can be reassured that they do not have cancer and the other tenth will have the very best possible chance of a cure.

11.—The earliest symptoms of cancer may be a little loss of weight without obvious cause. Loss of appetite, increase in weakness, anemia and perhaps vague distress in the abdomen represents all the symptoms in a large number of cases of cancer of the stomach. Many have had symptoms characteristic of peptic ulcer for years.

The usual earliest symptom of cancer of the uterus is bleeding, or any abnormal discharge, between the periods or after the menopause.

Any lump in the breast should be looked upon as a possible acute cancer. Half of such lumps when first noticed will be found to be benign and, of the other half, 85 percent can be permanently cured by operation. (Bloodgood).

12.—The only treatment of cancer is complete removal of all the growth and involved glands by standard surgical operation, or complete destruction of the growth by x-rays, radium or the cautery. In the majority of the cases, surgery is the accepted form of early treatment.

13.—The best results of surgical treatment follow the earliest removal of the growth. In a series of 564 cancers of the

breast, operated upon at the Mayo Clinic, 172 were operated upon early; 74 1/10 percent of the patients were alive and free of recurrence five to nine years later. Of the 392 patients who were operated upon after the axillary glands had become involved, 83, or 21 percent, were alive and free from recurrence five to nine years later.

14.—There have been innumerable attempts to cure cancer by special diets, by drugs, serums, cancer tissue products, emulsions, vaccines and bacterial products. None has been found of sufficient value to warrant its use. No series of authenticated cures has been demonstrated by any of these methods. The deplorable fact is that those who waste time with these or with the obvious fake cancer cures may be throwing away their only chance of a cure.

15.—The physician's duty is, not only to practice, but to teach and preach prevention and early signs and symptoms of cancer. The physician who fails to make a physical examination and, by whatever means may be required, to make sure that symptoms complained of are not due to cancer, fails to give his patient the chance of a cure to which he is entitled.

CARL A. HEDBLUM, M.D.

Chicago, Ill.

Intermittent Claudication and Tobacco

I AM reasonably certain Dr. David Edward Allen's patient (see CLIN. MED. AND SURG., July, 1929, page 497) is suffering from *intermittent claudication*.

For ten years I have treated a patient with this complaint—a man 71 years old, who feels young for that age. He had two attacks of podagra (gout) thirty years ago; was successfully operated upon for gallstones 18 years ago; and had never any trouble afterwards.

The cramp-like pains came on quite unexpectedly and were very serious. He was hardly able to walk one block. As he was intolerant of salicylates, I gave him, regularly, the juice of citrus fruits (oranges, grapefruit, lemon), morning and evening, to neutralize any systemic acidity. I also prescribed Fleischmann's yeast. The result is that he is much improved, though he does not keep to a diet.

The general belief is that smoking is the cause of intermittent claudication. If that

were true, all the people in the Far-Eastern countries ought to suffer from it, as they are born with cigarettes in their mouths. This patient has smoked (on the sly) since he was seven years of age and has kept it up until this day (cigars, pipes, cigarettes), even more since his trouble started, and is now more comfortable.

When he starts walking rapidly he is seized with cramps, but after a short rest he is now able to walk slowly for one or two hours.

I am very much interested to hear the opinion of other physicians. Generally I do not believe the statements of so-called authorities. They mostly repeat what others are saying.

F. A. BİSDOM, M.D.

Chicago, Ill.

Aurol in Carbuncles and Cancer

FORTY years ago, Sir James Paget suggested to me that radical operations for carbuncle were poor surgery, and my experience since that time has confirmed that idea. I give these patients 20 drops (1.3 cc.) of Aurol, in water, two or three or even more times a day, and the results are highly satisfactory. I use the same medication in practically all cases of staphylococcus and streptococcus infections.

A good deal has been written about the use of colloidal gold in the treatment of cancer. I have used Aurol (which I consider to be the best preparation of colloidal gold) in a number of such cases, but, unfortunately, many of my valuable records have recently been lost.

At present I am treating with Aurol a case which I have diagnosed as cancer of the intestine on the following findings: The history shows that the patient's mother and a half-sister died of cancer; the patient is over 60 years old; physical findings included a painful tumor in the abdomen, with tarry and bloody stools, and the general condition very poor.

I have given 20 drops (1.3 cc.) of Aurol, in water, two or three times a day, and an ounce of whisky three times a day; the latter because, in forty years of practice, I have never seen a case of cancer in a moderate user of whisky.

This patient is now much improved. The tumor is smaller; the stools are normal; and the general condition is much better.

Unless a malignant tumor is operated

upon in its incipency, I believe that surgery does more harm than good. The most satisfactory treatment I have found is Aurol and whisky, as outlined.

T. A. MARTIN, M.D.

St. Louis, Mo.

Physical Signs in Pulmonary Tuberculosis

SKILL in interpreting physical signs of tuberculous lesions in the lungs depends on an understanding of the underlying pathologic mechanism. Examiners encounter many variations in different cases. Some of these are not easily explainable, but most of them should convey definite information, if one is accustomed to construct in his mind a picture of pathologic anatomy as he moves his stethoscope over the chest. The variations are best explained by tracing a lesion through the stages of its development and advancement to necrosis, on one hand, and through its gradual healing, on the other.

THE EARLY STAGE

Most patients falling sick with pulmonary tuberculosis and presenting definite physical signs of its presence have a lesion occupying an area at least one or two centimeters in diameter. It is common knowledge that many have widely extensive lesions before they are aware of the presence of the disease, but for purposes of illustration the small lesion will be considered.

In its first stages, this lesion presents the appearance of an intact tuberculous nodule or of a small patch of tuberculous pneumonia. If it is situated deep within the lung or at some poorly accessible point beneath heavy bony or muscular structures, it may be impossible of detection by physical examination. But such instances are not common, and the great majority of lesions will declare themselves if the examiner is competent and painstaking.

On percussion, no definite abnormality may be made out, and the only change in breath sounds may be a diminution in intensity, due to decreased aeration of the diseased part. Indeed, slight deviations from the normal in the pulmonary resonance and in voice and breath sounds are so common in healthy persons that, alone, these changes are not of great diagnostic value. But the presence of *rales*, in addi-

tion, or even alone, is of the highest significance.

In the early stage, the amount of moisture associated with the tuberculous deposit is not great; consequently, the rales are fine, are confined to a small area, and sometimes one must listen sharply to make sure of them. Indeed, they may not be detectable unless auscultation is performed with the patient coughing and thus setting in motion the minimal secretion that gives rise to the *rale* (rattle). They persist and do not clear away as the patient coughs. This finding warrants the presumption of pulmonary disease, probably tuberculous, unless further investigation explains the abnormality on some other basis. A properly exposed x-ray film should show the lesion and corroborate the diagnosis. At this stage, the sputum often is negative for tubercle bacilli, because the tuberculous deposit has not yet ulcerated and discharged its germ-laden contents into a bronchus.

CASEATION AND NECROSIS

As the lesion grows older and more active, it becomes more dense. Thus, the percussion changes become more obvious, and more decided alterations in voice and breath sounds may be detected. At the same time, the center of the mass goes on to caseation and liquefaction necrosis. This means more moisture, through which the air currents must pass; consequently, the rales are definitely more numerous and more moist. The liquefied areas empty their contents into bronchi, leaving multiple, tiny, honeycombed cavities, and, therefore, the rales become moderately coarse and sometimes bubbling, as distinguished from the fine crepitations of the earlier stage. About the periphery of the process, the rales may still be fine, because necrosis may not have occurred there.

EXCAVATION

The small tuberculous deposit often excavates completely, leaving a hole one or two centimeters in diameter. The resulting cavity wall may be very thin, flaccid, and surrounded by almost normal lung tissue. Because of this peculiarity of structure, it does not constitute a good resonating chamber, and, therefore, does not give rise to the changes in percussion note and breath and voice sounds so characteristic of the cavity surrounded by consolidation or by a stiff, fibrous wall. Often this fresh,

thin-walled cavity produces rales of a suggestively bubbling or consonating quality. If one does not appreciate the significance of such rales, he will miss most cavities, because most of them do not produce the classical textbook signs. A few "cavities" are silent, in that none of these signs can be elicited.

HEALING

Tuberculous deposits may heal by resolution or fibrosis; usually by a combination of the two. Cavities sometimes become shrunk or even obliterated by the contraction of surrounding connective tissue. Healing may thus advance to the point where the patient is entirely free of symptoms; if healing is so maintained, the disease will not relapse. Nevertheless, the patient usually bears definite scars permanently, and physical examination will reveal them. Permanent alterations in breath and voice sounds and in thoracic resonance depend on the extent, density and degree of contraction of the fibrosis.

Most patients who have had active tuberculosis and recovered from it, never entirely lose their rales, even though they may remain perfectly well symptomatically. The rales are usually small and not very moist and may be detectable for years over the densest part of the old lesion.

The first examination of a patient may reveal tuberculosis in some stage of quiescence and healing. Physical signs may be of uncertain value in determining the need for treatment, and in these cases additional evidence must be gathered from the present symptomatology, sputum and x-ray examination; perhaps from a period of careful observation.

Little has been said about the gross changes in physical signs, these being self-evident as a rule. The location of the abnormal findings has a diagnostic bearing. Most often they are in the upper third of the chest. Apical rales have always been regarded as of greatest significance, but often they are below the apex. In a considerable group of cases, the earliest sign is persistent, fine rales in the upper third of the chest but below the level of the clavicle, and these should be taken just as seriously as apical rales. Tuberculosis at the base of the lung is not extremely rare, and adventitious basal signs should suggest this possibility when symptoms arouse suspicion.

Of all abnormal signs in pulmonary tuberculosis, the most important is rales.

Yet they will be missed in most of the early cases unless the patient's chest is stripped for examination and *unless the examiner, while he auscultates the chest, instructs the patients to cough at the end of each expiration.*

In all instances in which the physical examination reveals definitely abnormal signs in the lungs, an x-ray photograph should be made to substantiate the diagnosis. In patients with suggestive symptoms and negative physical signs, a radiograph should also be made, remembering that some early lesions can be discovered only in this way. Only in persons who are free from symptoms suggestive of tuberculosis and whose chests are normal on careful physical examination is it reasonable to omit the radiograph.

J. BURNS AMBERSON, JR., M.D.,
(In *Tuberc. Absts.*, July 1929.)
Detroit, Mich.

Dentists and Medical Education

I HAVE just finished reading the short article by Dr. Edwin C. Foppert, in your August issue of *CLINICAL MEDICINE AND SURGERY*, under the heading of "An Injustice to Dental Graduates," and am in full sympathy with the writer.

Previous to my entrance to dental college I had one year of regular college work, which, at that time, was not required for entrance.

No one can have too much education and I feel wofully lacking in a great many subjects. But, after five years of college and six years of the practice of dentistry, I feel that I am, not only as well, but much better prepared to enter medical college than are those who come with a literary degree. Certainly, after studying anatomy, physiology, bacteriology, pathology and many allied subjects, in the medical college, while studying dentistry, along with what knowledge one must absorb, in spite of one's self, in the practice of dentistry, one must be a fit subject for a medical education.

My idea is that any bonafide graduate of a Grade A dental college should, not only be exempt from a pre-medical course, but should be allowed to take examinations in a regular medical school in the subjects which are required in both dental and medical courses. The courses which he then

passes should not be repeated, unless elective, in order for him to obtain his medical degree.

I feel that there should be much closer cooperation between the two healing professions than there is at present, in order that the patient may have the best of service. This, of course, has been recognized and preached by a great many of both professions, but not put into practice often enough.

L. J. MORIARTY, D.D.S.
Watertown, S. Dak.

Pioneer Pharmaceutical Houses

IN 1794, the present firm of Schieffelin & Company was established in New York, but did not commence to manufacture pharmaceuticals until about 1870.

In 1828, Mr. William S. Merrell had a retail drug store in Cincinnati and, with his brother and nephew, started manufacturing. For many years the firm did a wholesale drug business, but fifty years ago that part of the business was discontinued and The William S. Merrell Company has continued to the present day, as successful manufacturers of pharmaceuticals.

Mr. Merrell was the first to discover the use and begin the manufacture of *podophyllin*, which has ever since been a leading specialty of the house.

In 1830, Otis Clapp started the business of selling medical books, some of which he imported from Germany and other European countries, and eventually he imported and then manufactured homeopathic medicines to supply the growing demand for that method of treatment in America.

In 1835 a similar business was established in New York, under William Radde, who afterwards sold out to the present homeopathic firm of Boericke & Tafel.

In 1844, John T. S. Smith commenced the manufacture of homeopathic medicines in this country and is believed to have been the first to actually manufacture, rather than import, the finished product.

All of these concerns are active and thriving today after their many years of continued existence.

These are the forerunners, or perhaps the big brothers or cousins, of the many lusty youngsters that have grown up in pharmaceutical manufacture, in more recent years,

some of them far outstripping, in size, their older competitors.

CARROLL DUNHAM SMITH.
New York City.

Patientia Nostra

A PROMINENT physician is reported to have said, recently, "The medical profession stands ready to render adequate professional services on terms within the people's means and, as for the indigent, the full services of the staffs of the magnificent hospitals of the country constitute our sufficient answer."

When was the medical profession not ready in rendering adequate professional services? As for the gesture of "philanthropy" by the "magnificent hospitals" toward the indigent, the less we say about it the better. But, in passing, we might mention, that, charging fifty cents to one dollar a treatment does not constitute "charity." Many patients visit such "free clinics" for two or three years. I am occasionally called upon to treat these "indigent individuals" and, strange as it may seem, they are quite willing to pay for appropriate treatment. I have mentioned in a previous article that the aim of such institutions, "religious" or otherwise, is a wholesale business, pure and simple. When is the medical profession as a whole going to realize the injustice of it all?

The situation is a serious one, but what does it matter? The "meek" and learned doctor doesn't bother; he allows members of the laity and many well-meaning members of the profession to dictate how he shall live. In view of the *status quo* it seems that we are sorely in need of a sensible reform.

We are urged to be business men. Fine! We should be! But I cannot agree with the statement that the cost to the public of obtaining the benefit of medical care (I presume surgical care, also) is exorbitant. Bunk, pure and simple! What is really intended is this: Some members of the time-honored medical profession endorse State Medicine.

It is a dream of an idle brain to have a fee schedule for medical, and particularly for surgical, care. No two cases are treated alike. Any well qualified physician, who has a real background and is not sailing along with a coat of veneer, knows this to be true. Imagine the reaction of the middle-

class patients when they learn that the "noble profession" has decided that its members are charging exorbitant fees. Conditions are terrible enough now, with the tyranny of stupid patients and bargain hunters. An error was made, to my way of thinking, when such an opinion was voiced.

Let us not forget that modern medicine is not founded on ignorance or superstition and, in spite of the many senseless premises that we are indirectly asked to accept, the day will come when we, or those who are to follow, will realize the true meaning of the proverb: *Magna est veritas et prevalebunt*.

A. M. BENNARDI, M.D.
Cleveland, Ohio.

Pulmonary Hemorrhage

BLEEDING is always very disturbing to anyone, especially when the blood comes from an unseen source, as in hemoptysis, and the anxiety of the patient or his friends and relatives frequently upsets the medical attendant and interferes with his efficiency.

It is well that physicians should have a well-planned routine for the treatment of pulmonary hemorrhage, which will spring to mind almost automatically in an emergency; and also that nurses or other attendants, who are caring for a patient or patients who may suffer this mischance, should have definite instructions as to their duties.

According to the amount of blood lost, hemoptyses may be classed as: (1) *Blood spitting*—when the bleeding amounts to less than a teaspoonful; (2) *hemorrhage*—when more than a teaspoonful of blood is lost.

WHAT TO DO WHILE WAITING FOR THE DOCTOR

1.—Blood spitting.

- A.—Put the patient to bed in the most comfortable position, and keep him quiet until seen by the physician.
- B.—Notify the physician *at once*.
- C.—If the patient is dressed, undress him *carefully*.

2.—Hemorrhage.

- A.—Put the patient to bed at *absolute rest*, in a semi-sitting position.
- B.—Notify the physician (emergency!) *without leaving the patient* until he arrives.
- C.—Get the *hemorrhage basket* ready. (See below).

- D.—If the patient is dressed, leave the clothes on until the immediate emergency is past; then remove them cautiously.
- E.—Someone must always be left with the patient.
- F.—Keep the blood out of sight of the patient as much as possible and change the pus pan or sputum cup frequently. Do everything possible to make the patient think that the blood is small in amount.
- G.—Help in every way to keep the patient calm; try to assure him the bleeding will probably soon cease. Assure him that the doctor will soon be there. Do not become excited and nervous yourself. Keep the members of the family quiet.
- H.—Insist that the patient control his cough as much as possible. Instruct him to cough only to raise loose clots.
- I.—The nurse or other attendant should hold the pus pan, and should wipe the patient's mouth after each expectoration; should give him small bits of ice on a spoon if he desires; give, through a drinking tube, a small swallow of cool water frequently; and should wait on the patient in every way possible, in order to help him to remain at absolute rest.
- J.—Fluid should be restricted to a minimum, without making the patient uncomfortable.
- K.—The diet should be small in amount, limiting fluids and giving dry toast, crackers and sips of ice-cold milk.
- L.—In extreme condition, crush an amyl nitrite perle and allow the patient to inhale the fumes. Do this in case the doctor can not be contacted or is slow in arriving.
- M.—Keep the hemorrhage basket in readiness for use at any time and anticipate the doctor's wants.

OUTLINE OF TREATMENT (FOR THE PHYSICIAN)

- 1.—Rest.
A.—Semi-sitting posture in bed.

- B.—No talking; no visiting; no friends in the room.
 - C.—Keep the homes of suspicious cases supplied with a hemorrhage basket, including instructions to nurses; outline of treatment; all contents of basket complete, and this basket at the bedside, which shows the patient you are ready to handle the emergency.
 - D.—Reassure the patient and avoid becoming excited.
 - E.—Artificial pneumothorax.
- 2.—Lower the Blood Pressure.
A.—Amyl nitrite perles.
B.—Nitroglycerin, Gr. 1/100 (0.65 mgm.) hypodermically.
C.—Absolute rest.
D.—Tincture of aconite, in high blood pressure.
E.—Tincture of digitalis, in low blood pressure, every 4 hours.
F.—Two ounces (60.00 cc.) of a saturated solution of magnesium sulphate.
 - 3.—Increase the coagulability of the blood.
A.—Give a hypodermic injection of atropine sulphate, grs. 1/25 (2.6 mgm.)
B.—Diet: limit liquids; maintain a highly dry diet; give gelatinous foods, especially meat gelatin.
C.—Give intramuscular or intravenous injections of pituitary solution, 0.5 cc.
D.—Injection of 20 cc. of horse serum.

Note: In a great number of cases of hemoptysis, the bleeding stops spontaneously. First decide whether the origin is venous or arterial. If venous, it is probably due to passive congestion and should be treated accordingly. If arterial, follow the outline above.

CONTENTS OF HEMOPTYSIS BASKET

- 1 Apron, rubber, 3 feet square.
- 2 Pus pans.
- 1 Small ice pan.
- 1 Teaspoon.
- 1 Hypodermic syringe (Luer, 2 cc.) with sterile needles.

Hypodermic Solutions:

- Atropine Sulphate, gr. 1/25 (2.6 mgm.) to the cc.—1 ounce.

Codeine, gr. 1/4 (16 mgm.) to the cc.
—1 ounce.

Morphine Sulphate, gr. 1/8 (8 mgm.) to the cc.—1 ounce.

Nitroglycerin, gr. 1/100 (0.65 mgm.) to the cc.—1 ounce.

Strychnine Sulphate, gr. 1/30 (2.2 mgm.) to the cc.—1 ounce.

Pituitary solution, 3 or more ampules.

Horse serum, desiccated, 3 or more ampules (if not desiccated, keep on ice).

Para-Thor-Mone, 4 or 5 cc. ampules.

Digifoline, ten 1 cc. ampules.

Emetin—ampules or sterile solution.

Camphor in oil, grs. 3 (0.2 Gm.), ten ampules.

Other Medicines:

Calcium Lactate, gr. 5 (0.32 Gm.), fifty powders.

Amyl nitrite perles, ten.

Tr. Aconite, 2 ounces.

Other Necessary Equipment:

3 Packages of gauze.

2 Drinking tubes.

2 Flannel bandages.

1 Sterile artery forceps.

1 Package sterile gauze.

3 Oz. alcohol (95 percent).

WALTER H. WATTERSON, M.D.,

U. S. Veterans' Hospital.

Maywood, Ill.

The Brave Baby

IN MY experience with new-born infants I have found that they show fear only on two occasions: A loud noise and when support is pulled out from under them. Nothing else will call out fear.

Fear of the dark, of animals or other things, which appears in early childhood, is not due to the awakening of instinct. These fears are built on happenings in the home, and we can show this experimentally in the laboratory.

A baby played naturally with a rabbit until a steel bar was banged behind his head each time the rabbit appeared. After four such experiments the sight of the rabbit alone, without the noise, served to make the baby cry and crawl away. Occurrences of similar nature in the home are the factors that awaken fear.

No child, at first, is afraid to be put to bed alone in the dark. But suppose the wind blows over a screen with a loud bang, or

the door bangs as you leave the room. You have almost an ideal situation for making the child afraid of the dark.

Taking a baby into a room full of laughing, noisy adults will very often bring out a fear reaction. After you have done this a few times the child begins to cry when he sees a stranger. You have caused this shyness by your own thoughtlessness and mis-handling.

DR. JOHN B. WATSON,

From *The Parents' Magazine*.

"Dentistry at the Crossroads" (A Reply)

MY ATTENTION has just been called to an editorial in the June, 1929, number of *CLINICAL MEDICINE AND SURGERY* entitled "Dentistry at the Crossroads," at the end of which is a very gracious invitation for those who have "truly valid and reasonable arguments against the course here suggested" to express themselves.

In another editorial, in the same issue, there is a most sympathetic appreciation of the life work of the late Dr. Truman W. Brophy, which must appeal to all of those who were friends of this distinguished practitioner. But into this editorial there has crept a serious misconception of Brophy's attitude on the subject which the Editor advocates; viz., that dentistry should be a specialty of medicine. The statement is made that "Brophy will take his place in medical history as the illustrious protagonist of dentistry as a specialty in medicine."

This would assuredly seem to imply that Brophy was in favor of making dentistry a specialty of medicine, when, as a matter of fact, he was one of the most pronounced opponents of that idea that I have ever known. He was opposed to it because it had been proved to him that the idea was impractical.

In the early 80's he, with others, organized the Chicago Dental Infirmary for the purpose of teaching dentistry. It was the first dental school in Illinois and the name was shortly changed to the Chicago College of Dental Surgery. It began with the requirement that every candidate must first be a medical graduate, and the impracticability of the plan was so quickly demonstrated that the idea had to be abandoned after one year, for the simple reason that students would not come. The first graduating class under the proposed plan con-

sisted of two men. As soon as it was changed to an institution that admitted candidates to the study of dentistry after a suitable academic education, it attracted students in such numbers that, up to this date, it has graduated more than 5,000 dentists.

This experience convinced Brophy that the idea of making dentistry a specialty of medicine was not feasible and he was ever thereafter opposed to it. I worked with Brophy on the most intimate terms in dental educational work for more than forty years, and I knew his sentiments on this question perfectly.

He was in favor, as are all thinking men, of the closest cooperation between medicine and dentistry and he recognized the inter-relationship of disease processes throughout the body, but he had learned that the problem of making dentistry a specialty of medicine, in the same sense as are otology, ophthalmology, rhinology, etc., can never be carried out. If it was impractical in 1880 it is much more so now, for the reason that the dental curriculum has been extended many times in length over the curriculum of 1880, and the man who would contend that we are teaching more dentistry today than we should have considerable temerity.

An adequate education in medicine to entitle a man to the degree of M.D., and on top of this sufficient dental knowledge to enable him to practice dentistry acceptably, would extend his course of study to such a length that very few men would ever take it. At present, in most of the dental schools, the course is at least four years, with one year of predental work in a university, making five years in all.

It is true that some of the subjects in the first two years of the dental course are similar to the fundamental medical subjects, but the treatment of those subjects is never identical with that of the medical course, nor would they accord with dental requirements if they were.

The training of dental students in a medical school has never been successful, and it never will be unless the course is extended sufficiently long to be wholly out of the question. Dentistry has learned much from medicine and it hopes to learn more, but it can never hope to advance as it has in the past if it sinks its identity and becomes an

appendage of medicine. We need cooperation but we do not need absorption.

C. N. JOHNSON, L.D.S., D.D.S.,
Editor *Journ. Am. Dental Assn.*
Chicago, Ill.

Bloodless Delivery with Unruptured Membranes

ABOUT thirty-five or more years ago, I was called to a "shack" down by the railroad to attend a well-developed, single mulatto, aged sixteen.

I found the girl in bed, and with her was a cold sac of amniotic fluid, still unruptured, containing about a quart of a substance resembling pea-soup, floating in which was a foetus of four or five months. There was no odor and *no hemorrhage at all*.

The patient made an uneventful recovery in a week, and no questions were asked. I received for my services a cage and a singing canary, as a souvenir—all they had to offer.

HOMER CLARK BENNETT, M.D.
Lima, Ohio.

When Sleep Goes

THE sudden death of Lord Harcourt, from a very small dose of a comparatively harmless hypnotic, ought to serve as a timely warning to all those who may be inclined to purchase, on their own responsibility, a few hours' sleep in this way. The history of veronal, once supposed to be a safe sleep producer, is another warning.

For the public there is no such thing as a safe hypnotic that is also an efficient one. There is always the possibility of some danger for any but the most vigorous of hearts. There is also the fair probability that a drug habit will be formed.

Any general advice must therefore be directed to those in whom insomnia is just beginning to make its appearance—whose hours of sleep are commencing to be curtailed or disturbed. For those there is a cure, if they can be made to realize that, once insomnia begins, it will probably go on and become worse, unless something is done to check it, and that something may have to be rather drastic.

The main cause of insomnia is worry and anxiety, often of a financial character, and this is not easy, and some times not

possible to remove. A comfortable legacy at the right moment is the best of all cures.

Directly a man's sleep is becoming curtailed, he ought to go away, to the sea or the mountains, for a time to recover his sleep: To the mental pinpricks that produce it, he must oppose physical fitness. This is not easy advice to follow; but if he goes on, his business will go and his health will go, too. It is better to preserve one of them. If the means for this are not available, there are other methods that can be followed at home, though they are not so effectual.

The patient should devote several hours, during the latter part of the day, to open-air exercise, so as to produce physical fatigue, which is the greatest enemy to worry and the greatest aid to sleep.

He should not go to bed with an empty stomach; and once one begins to sleep badly in a certain room, the associations tend to encourage sleeplessness. It is therefore sometimes useful to change the sleeping room. The insomniac should see to it that his feet are warm and his pillow fairly high. Sometimes a hop pillow will produce good results.

A light supper about 8 P. M. is a good plan; and a glass of fairly hot milk, taken as one goes to bed, is a good soporific. Above all, one should retire, not with the dread of a bad night in mind, but with the fixed idea of a good one.

Let anyone with incipient insomnia give these hints a thorough trial, with confidence in their efficacy; but there must be courage and perseverance.

B. SHERWOOD-DUNN, M.D.

Nice, France.

Tonsillitis and Related Throat Conditions

IN VIEW of the widespread attention which has been given, in recent years, to tonsil defects and their remedy by tonsillectomy, it was deemed worth while for the Public Health Service to make a study of acute and chronic diseases of the tonsils and throat. The results of this study are given in a Public Health Bulletin (No. 175) recently issued.

Some of the outstanding results may be briefly summarized:

The incidence of tonsillitis and related conditions of the pharynx is higher among children of school ages than before or after those ages. Laryngitis, on the other hand,

appears to occur more frequently among adults than among preschool or school children. Tonsillitis and related conditions of the pharynx appear to be the only important respiratory affection which show this particular age incidence, that is, higher during the school ages than among younger or older persons.

The incidence of tonsillitis and related conditions of the pharynx appears to be considerably higher for females than for males.

The relative age incidence of acute tonsillitis and sore throat is strikingly similar to the relative age prevalence of diseased tonsils, as found on physical examination. The relative prevalence of enlarged tonsils, as found on physical examination, is also similar to the relative age incidence of acute tonsillitis and sore throat, but does not show so close a correspondence as the curve for diseased tonsils.

The prevalence of defective tonsils does not seem to be significantly greater in rural than in urban districts. Removal of the tonsils, however, was considerably more frequent in the urban groups examined than in the rural.

The prevalence of defective tonsils seems to vary somewhat with the season of the year, but the variation is less than the variation in the incidence of acute tonsillitis and sore throat. The maximum prevalence of defective tonsils appears to be reached about April, a period of two or three months after the maximum incidence of acute tonsillitis and sore throat and of colds.

The incidence of sore throat seems to be more than twice as great for school children with defective tonsils as for those whose tonsils have been removed. The incidence among children with normal tonsils also appears to be less than among those with defective tonsils.

Respiratory diseases other than tonsillitis appear to be somewhat more frequent among children with defective tonsils than among those with normal tonsils and those whose tonsils have been removed. Among adults there seems to be little difference in the incidence of these respiratory diseases in the different tonsil groups.

The incidence of illness from rheumatism and related conditions appears to be higher among adults who have attacks of tonsillitis than among those who are free from tonsillitis.

The incidence of diphtheria among children with defective tonsils seems to be much

higher than among tonsillectomized children. Among children with normal tonsils it appears to be only slightly higher than among those whose tonsils have been removed.

The results of the physical examination suggest that adenoids, enlarged cervical glands, conjunctivitis, eye strain and decayed teeth all tend to be slightly more prevalent among children with defective tonsils than among children with normal tonsils or among those whose tonsils have been removed.

Filled teeth are more prevalent among children whose tonsils have been removed, indicating that the tonsillectomized children are a somewhat selected group, coming from families that are more able or more willing to secure the correction of remediable physical defects in their children.

Height and weight measurements and records of growth in weight, over a period of nine months, for a group of school children, did not show any advantage in the growth of one tonsil group over another. Data from the literature seem to indicate a more rapid growth immediately following tonsillectomy, but this does not appear to continue for any extended period of time.

U. S. PUBLIC HEALTH SERVICE.

The Family Doctor*

IN ALL fields of modern enterprise we are facing the problem of the perils of specialization. The highest achievements of modern life are due to the fact that modern science has given us the specialist.

But humanity has a habit of swinging from extreme to extreme.

The old generalist sinned on the side of superficiality, but the modern specialist is sinning on the side of fractionalism.

Nowhere is this more evident than in the field of medicine.

When all is said and done, the doctor must treat patients, not parts of patients.

A patient may be examined by ten specialists and the results of their examinations will have a depth and breadth and accuracy that would be impossible apart from intensive specialization, but the patient may die unless the separate findings of the sepa-

rate specialists are seen in their relation and result in sound conclusions respecting treatment of the patient, not as an aggregation of organs, but as an *organism*.

I should like to say to young men who, reading this, may be thinking of medicine as a career, that humanity needs great general practitioners—great family doctors.

I am convinced that the greatest opportunities in medicine today lie in the field of general practice.

The general practitioner has a chance to study disease that rarely comes to the specialist. He can know whole families and know the tangled forces of heredity that focus in the individual; he can know the individual over a long stretch of years, not in brief hours of examination; he can know the long-time results of treatment.

We need the specialized practitioner, we need the consultant, but we need also the general practitioner.

It is very important that young men considering medicine as a career should realize that to be a general practitioner does not necessarily mean being shunted off into the meager life of a rural pill-peddler, but that we are at a point in the evolution of medicine when the situation cries aloud for a new race of highly trained general practitioners.

GLENN FRANK,
President, University of Wisconsin.

(Continued from page 739)

On the day after the operation, the patient's temperature rose to 103.6°F.; pulse, around 90. There was no respiratory disturbance. The temperature continued high, around 103°F.; pulse around 100, for the next five or six days. The bowels moved. There was slight distension, but not much pain.

On the seventh day the temperature rose to nearly 104°F.; the pulse to 120. The patient was somewhat delirious and vomited a greenish fluid. The distension was a little more marked, though the bowels moved freely.

Requirement: Faced with this situation, what is the probable diagnosis? and what is to be done presently?

*Reprinted from the *Chicago Daily News*, May 8, 1929.

THE LEISURE HOUR

Autumn Morning



RED through the mists of morning the round sun uprises;
Bright shine the dew-drops on fresh-washen faces of flowers;
Rich, earth-born scents and the songs of the birds are the prizes
Given to lovers and seekers of day's early hours.

Hark, how the brook whispers soft where it steals through the mosses !
Look, where the asters and goldenrod bend in the breeze !
Who would be thinking of sorrows and heartaches and losses,
Meeting the kiss of the wine-wind on mornings like these ?

Firm in the saddle, my horse's hoof beating like thunder;
Drinking in beauty which greets me through eyes, nose and ears;
Galloping, keen with the autumn's delight and earth's wonder,
Life fills my heart with its joy and my eyes with glad tears.

—GEORGE BURT LAKE,
from "An Apostle of Joy."



The Spirit of Oriental Culture*

India occupies one-half the area covered by the United States, and has twice as large a population. Of her 325 million souls, two percent (about 6,000,000) are Christians; 25,000,000 are Buddhists; 70,000,000 are Mussulmans (Mahometans); and the rest are Hindus.

The Chinese and Japanese are content to trace their spiritual and esthetic life to India, and make little distinction between Buddhism and Hinduism; but the motivating force of their art and culture is different.

The culture of India is *intuitional*—it constantly reaches out to know and convey fundamental truth directly; that of China is *mental* (the Chinese value knowledge for its own sake); while that of the Japanese concerns itself chiefly with the development of the *esthetic faculties*.

Most of the Chinese military leaders belong to the contemplative sect of the Buddhists, in order that, with their physical activities, they may attain a balanced life. It is unbelievable that a nation of Buddhists should ever be militaristic.

The strict limits of caste, in India, are breaking. Some of the Brahmins of the highest rank will now eat at the table with Christians (who, of course, are outcastes), and partake of food prepared by an outcaste cook. This would have been impossible, even a few years ago, for the most important points in caste observance are with whom one eats and whom one marries. In these particulars they do not differ materially from us. Of course, when an Indian devotes his life to meditation and spiritual development, he is above and beyond caste.

The Orientals consider that there are two important principles in a work of art: The fulfilment of the artist's "dharma"—his mission in life or his inner nature, so to speak, for there is no exact English equivalent for that word; and the attainment of "liberation." Spiritual liberation does not mean being thrown off into space; it means freedom from domination by any of the vehicles of consciousness—the body, the emotions or the mind.

One cannot live with a beautiful thing without carrying its influence into one's daily life, and thus gaining liberation from one's lower nature. So the Oriental exer-

cises his faculties in art, not for art's sake, but for the spirit's sake.

Dr. J. C. Bose, the Indian scientist, has demonstrated that minerals, plants, animals and human beings, all react to stimuli in the same general manner. The Oriental recognizes that *Oneness* is the eternal truth. There are many ways of looking at a thing, but there is only one thing at which to look.

Even the medical practice of India consists of measures designed to clear away obstructions to the flow of spiritual force.

The "spirit" of India is essentially *spiritual*. When the Christian sings:

"The heathen, in his blindness,
"Bows down to wood and stone."

he is speaking at random of matters regarding which he knows nothing. *There is not an idolater in India.* Every image they use is a symbol of some aspect of the *One Great Life*; and as everything in nature is a part of His manifestation, everything possesses qualities which render it worthy of worship.

G. B. L.

Just A Fourth

Conversation overheard by E. P. S. of West Virginia.

A very light colored mulatto woman was admitted to the hospital for operation. In taking her history she was asked how much negro blood she had. Her reply was, "Well, I always thought I was an octoroon, but a doctor recently examined my blood and found it 4 plus." —J. A. M. A.

Meeting the Indications

A religious evangelist painted on the posts along the road:

"What will you do when you die?"

An enterprising medicine-show man who followed him added the answer:

"Use Black Snake Oil, Good for Burns."

My Paw

Paw sez it's terrible to have a great ambition

An' then sorter, so to say, not hit it.

But that aint nothin' to the terrible condition

When you marry fer money an' then don't get it.

—B. H.

*Abstract of a lecture by Dr. James H. Cousins, Irish Orientologist.

Diagnostic Pointers

Contusions and Incomplete Fractures

Injuries of the back are often spoken of as contusions. The diagnosis of contusion is not justified unless everything else is eliminated. Proper investigation will reveal a greater frequency of fracture of the transverse processes, incomplete fracture of the vertebral bodies and sacral injuries.

Many so-called sprains and contusions, especially in the vicinity of joints, often prove to be incomplete fractures.—DR. ISADOR COHN, New Orleans, in *Northwest Med.*, Mar., 1929.

Prostatectomy and Sex Function

The sexual function is approximately unchanged in about half the cases of prostatectomy; diminished in, perhaps, ten per cent; and probably improved in the remainder.—*Urologic and Cutaneous Review*.

Pruritus Ani and the Prostate

In pruritus ani, in the male, remember the possibility of a chronically inflamed prostate being causative. In all male cases, investigate the prostate thoroughly.—*Urologic and Cutaneous Review*.

Tuberculosis and Cancer

Persons suffering from acute tuberculosis rarely develop cancer. There may be some specific reason for this, or it may be largely because they have not reached the cancer age.—DR. JOSEPH C. BLOODGOOD, Baltimore.

Atropine Fever

One of the by-effects of atropine occasionally observed, especially in infants, is a rise of temperature or "atropine fever." It usually appears within from three to four hours following administration, reaching its apex in from six to eight hours.

The flushing and fever provoked by atropine need not be disconcerting to the

physician. The important thing to realize is that it may occur.—Editorial *J.A.M.A.*, May 11, 1929.

Arm Swinging

Swinging our arms when we walk is a remnant of our quadrupedal method of locomotion in the remote past.—DR. WILLIAM A. WHITE, Washington, D. C.

The Permanence of the Schick-Negative State

Immunity to diphtheria, as indicated by a negative Schick test, is not necessarily permanent.

In a group of 973 re-examined children, 533 had been negative to the Schick test 1 to 7 years previously and 440 had been positive and became negative only after injections of prophylactic mixtures. There was but little difference in the Schick-positive rate of the two groups on re-examination.—DRS. H. J. PARISH and C. C. OKELL, in *Lancet*, Aug. 18, 1928.

Specialized Muscle in the Pregnant Uterus

Histologic investigation has shown that there exists, in the outermost or subperitoneal layer of the pregnant human uterus, a special muscular structure which resembles the conductive bundle of the heart—the bundle of His.—DR. J. ISFRED HOSBAUER, Baltimore, in *J.A.M.A.*, Feb. 16, 1929.

Pelvic Disease and Headache

Pelvic disease may cause headache: (1) Through blood loss with resulting anemia, malnutrition, lowered resistance and increased irritability of all the nerves; (2) by septic absorption from an inflammatory focus, with like results; (3) through peritoneal irritation, with consequent malnutrition from vomiting or other digestive dis-

turbance; (4) through pain so persistent or so recurring as to put the whole nervous system in an irritable hypersensitive condition; (5) through worry over serious pelvic lesions or even about a minor lesion.—DR. G. C. MOSHER, Kansas City, in *J. Missouri St. M. Assn.*, Nov., 1928.

Eclampsia

Eclampsia is easy to diagnose; all that is required is to note the quantity of urine passed in 24 hours, with albuminuria, and to take the arterial tension frequently.

Albuminuria may appear in a very fulminating way, the quantity of albumin often rising very quickly to 30 or 40 Gm.; at other times increasing steadily for days. The quantity of urine, as a rule, tends to be reduced; the urine is always very dark and may be bloody.

Hypertension is a symptom, the highest point reaching often 200 or 250 mm., or even more.—DR. C. JEANNIN, *Canad. M.A.J.*, Nov., 1928.

Insulin Reactions

Neither the dosage of insulin nor the blood sugar level can be taken as a criterion for the reaction to insulin. This has been verified over and over again in observations made in more than 700 diabetic patients.—DR. H. J. JOHN, Cleveland, in *J. Metabolic Research*, Jan., 1925—Dec., 1926.

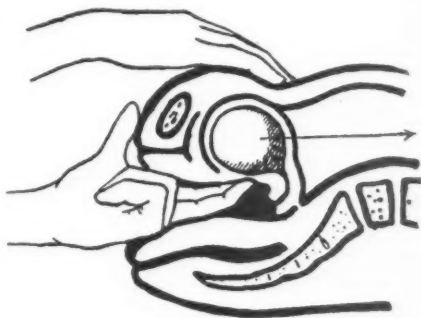
The Etiology of Epidemic Encephalitis

There is a probable association between gall-bladder disease or, more particularly, gall-bladder toxemia, and the so-called epidemic encephalitis following influenza. This opinion is based on about 40 cases met with, most of them of the endemic or sporadic type. The brain is evidently involved by way of the blood stream.—DR. S. R. SALZMAN, Toledo, O., in *Ann. Intern. Med.*, Apr., 1929.

Early Sign of Pregnancy

Ladin's sign becomes evident, often as early as the fifth week, and always in the sixth, or even during the first month. It consists in a circular area along the median line in the anterior wall of the uterus (or

in the posterior wall, when the uterus is extremely retroflexed) of peculiar elastic resiliency. It gives the palpating finger a distinct sensation of elastic fluctuation. This area is at first the size of the finger tip, gradually increasing in size until between the third and fourth month nearly the entire anterior body gives the "cystic" or elastic feel.



The bladder should first be emptied. Bimanual palpation is then used, the external hand exerting pressure to steady the fundus, the fingers of the other hand palpating the anterior (or, in retroflexion, the posterior) wall of the uterus, from cervix to fundus.

Ladin's sign is always present in intra-uterine pregnancy; never present in ectopic pregnancy. The absence of the sign does not preclude ectopic pregnancy but does preclude intra-uterine pregnancy. This is a valuable differentiation.—DR. LOENNE, in *Centralb. f. Gynäk.*, 1925, p. 2407.

Osteitis Deformans (Paget's Disease)

In Paget's disease of the bones, a roentgenogram will show a thickening of the vault of the cranium, with a fuzzy, cotton-wool appearance of the skull. We do not know the cause of this disease.—DR. LEWELLYS F. BARKER, Baltimore, Md.

Pyloric Spasm

Many symptoms in adults, arising from pyloric spasm, may lead to the suspicion of gastric ulcer, etc. A small dose of belladonna (6 minims of the tincture), with a few grams of sodium bicarbonate, should settle the diagnosis. If the pain and other symptoms from which the patient suffers are due to ulcer, to cholecystitis or to a chronic

appendicitis, the relic of an acute attack, there will be no relief from the medicament. On the other hand, if due to pyloric spasm, there will be a positive relief of all pain and discomfort and the patient can freely eat things which he formerly feared.—DR. E. S. MOORHEAD, Winnipeg, in *Canad. M.A.J.*, Jan., 1929.

The Pineal Body

A review of the literature up to 1927, relative to the pineal body, by Jelliffe, indicates that our knowledge is fragmentary and that progress in the future may depend on systematization, correlation and the direction of research toward certain definite ends. The preponderance of evidence favors the absence of an internal secretion and an actual neuroregulatory function.—Editorial, *J.A.M.A.*, Feb. 1, 1929.

Endocrine Dysfunction and Tinnitus Aurium

Of 1,000 cases of tinnitus aurium studied, 585 were demonstrably of endocrine origin. Pituitary hypofunction was associated with tinnitus in 36 percent of the cases; thyroid hypofunction in 34 percent; gonad hypofunction in 36 percent; suprarenal hypofunction in 25 percent; and pluriglandular hypofunction in 38 percent.—DR. D. W. DRURY, *J.A.M.A.*, Nov. 17, 1928.

The Endocrines in Deafness

It seems probable that, in many cases of deafness, not due to demonstrable lesions, endocrine dysfunction is an important factor, and cases of this sort should be carefully studied from the endocrine standpoint.—DR. H. LYONS HUNT, in *Med. Times*, Aug., 1927.

Clinical Notes Regarding Insulin

A transient hemiplegia may, in a rare instance, follow insulin treatment. The cause is not quite clear.

Cases of diabetes, refractory to insulin treatment, may be accounted for by the following known to antagonize insulin action: (1) concurrent infections or sepsis; (2) disturbed function of certain of the endocrine glands such as the thyroid, pituitary and suprarenals; (3) inefficient treatment of severe cases with high or imperfectly con-

trolled diets and insufficient insulin; (4) liver diseases, especially cirrhosis and bronzed diabetes.—DR. E. S. DUBRAY, San Francisco, in *Am. Med.*, Nov., 1928.

Blood in the Stools of the Newborn

The benzidine test for occult blood was found positive in 29.38 percent of 1518 stools of 109 newborn infants.

Certain observations seem to warrant the assumption that the bleeding is due to an intense hyperemia set up in the upper portion of the small intestine by the first products of digestion, by the primary bacterial invasion, or by both.—DR. B. E. BONAR, Salt Lake City, in *Am. J. Dis. Child.*, Oct., 1928.

Ocular Tuberculosis

Every corneal lesion or inflammation of the iris or choroid, where an obvious cause is not evident, should be suspected of being tuberculous. Be careful in the use of tuberculin. Begin with a dose of 0.001 mgm., gradually increase to 1 mgm., and do not consider the case to be tuberculous unless local, general and focal reactions are obtained.—DR. MEYER WIENER, St. Louis, in *Illinois M.J.*, Nov., 1928.

Exophthalmic Goiter

One of the earliest signs of exophthalmic goiter is insufficiency of ocular convergence. Whenever this is observed, look for other symptoms, such as shortness of breath, tremor, moist palms, headaches and enlarged thyroid.—DR. MEYER WIENER, St. Louis, in *Illinois M.J.*, Nov., 1928.

Neuroses

Neuroses are responsible for more human misery than that which results from tuberculosis or cancer.—DR. WILLIAM J. MAYO.

Medical Examinations

Early diagnosis is essential to successful medical work and I know nothing which will encourage it more than a universal habit, among the medical profession, of making careful, systematic and complete examinations and recording them in a proper manner. If a doctor does not keep some records, even if incomplete, he is doing a

gross injustice to his patients and to himself.—DR. CHAS. L. MINOR, Asheville, N. C., in *M.J. and Record*, Nov. 21, 1928.

Mercury Poisoning from Amalgam Fillings

Cement or gold dental fillings should be substituted for all forms of amalgam since the harmful effects, arising from mercury poisoning, are nearly certain to be felt sooner or later. Whenever the urine or stools show the presence of mercury, amalgam fillings should be removed. Many cases of "neurosis," "neurasthenia" and "migraine" are undoubtedly cases of mercuric poisoning from amalgam fillings.—DR. A. STOCK, in *Mediz. Klinik*, July, 1928.

Upper Respiratory Tract Infection with Gastro-Intestinal Symptoms

The great majority of gastrointestinal cases, in infants and young children, are based upon an acute focus of infection, mostly in the middle ear, which, at the time, gives no special local manifestations.—DR. J. R. ASHE, Charlotte, N. C., in *Southern Med. and Surg.*, Nov., 1928.

Diagnosis of Whooping-Cough

In the absence of fever, catarrhal symptoms, etc., a leukocyte count exceeding 12,000 may be regarded as suspicious of pertussis in a young child. If the leukocytosis increases in the following 2 or 3 days, the diagnosis is confirmed. Children with whooping-cough show, without any exception, a marked hyperleukocytosis.—DR. P. LEITNER, *Jahrb. f. Kinderh.*, Sept., 1928.

The Dextrose Tolerance Test in Diabetes

In the dextrose tolerance test (100 Gm. of dextrose, given orally, fasting), it is shown that the amount of glycosuria occurring during the test cannot be taken as an index of severity of diabetes, because of differences in renal thresholds in different individuals. The height of the blood sugar curve in such tests, however, may be accepted as a criterion of the gravity of diabetes.—DR. M. WISHNOFSKY, in *Arch. Intern. Med.*, Sept., 1928.

Measles

There is every indication that we are just on the threshold of enlightenment as to the specific cause of, prevention and treatment of measles.

So far, the only worthy measure of prevention is the injection of convalescent human serum.—Editorial, in *Internat. Med. Digest*, July, 1928.

Cardiac Energy Index

The sum of the systolic and diastolic blood pressure readings, expressed in millimeters of mercury, multiplied by the pulse rate, gives the energy index. An index below 13,000 or over 20,000 suggests disease conditions requiring prompt attention.—DR. J. T. SCOTT, in "Manual on Blood Pressure".

Pulmonary Tuberculosis

It is proverbial that patients with pulmonary tuberculosis most frequently try to conceal their symptoms. This is a psychologic protective reaction. Failure to tell the truth has lost many lives from tuberculosis. If the slightest suspicion is aroused in the doctor's mind, a thorough x-ray study of the chest, using stereo roentgenograms, should be made.—DR. BENJAMIN J. STATER, in *X-Ray Bul.*, July, 1928.

Edema in Sinus Disease

Most general men think of sinus disease in terms of pus, and believe that if pus cannot be obtained the sinuses are negative. This is not true. Edema is the first and most outstanding pathologic change, and when the mucosa becomes edematous, function is stopped at once. If the edema persists, other symptoms must follow.—DR. WM. V. MULLEN, Crile Clinic, Cleveland, O., in *Bul. Chicago M.S.*, Aug. 11, 1928.

The Thymus Gland Obsession

Dr. John Lovett Morse, in a recent paper, stated that he found sufficient evidence to support his contentions that the thymus gland had become such an obsession to many physicians and pediatricists that its orderly study seems to have been seriously handicapped.—*Internat. Med. Digest*, May, 1928.

Current Medical Literature

Growth Disorders in Mental Disease

Dr. F. I. Wertham, of Boston, in *Arch. Neurol. and Psychiat.*, May, 1929, gives the findings in a study of 923 cases of mental disease observed in the Henry Phipps Psychiatric Clinic, in which there were recorded the presence or absence of deviations of anthropologic makeup which come under the heading of growth disorders.

The purpose of the study was to determine what type of growth disorders occurs in a morphologically and psychiatrically unselected group of mental patients and how these disorders are distributed in the different diagnostic groups.

The findings were summarized as follows:

1.—Under the term "growth disorders" are included the more marked abnormalities of bodily configuration, which have been variously described as stigmas of degeneration, dysplastic signs, errors of development, etc.

2.—In 923 unselected psychiatric patients, a series of growth disorders was found which are enumerated under the following headings: Skeletal anomalies, asymmetries, disproportions, malformations, anomalies of development of primary and secondary sex characteristics, anomalies of glands other than sex glands, anomalies of fat distribution, anomalies of hair distribution and anomalies of complexion (skin).

3.—Among these growth disorders, three broad groups can be tentatively distinguished: (1) Definite congenital malformations; (2) growth disorders which constitute the more typical endocrinologic syndromes, either full-fledged or "mitigated" (Oswald); (3) growth disorders with similarity to endocrinologic disorders, but occurring in clinically not-well-definable types. For the last two groups, however, this division could be carried out only with clinical and physiologic methods and not by morphologic criteria alone.

4.—Of 923 patients, 194, or 21 percent, showed growth disorders. The largest incidence was in schizophrenic psychoses (36.4 percent), followed by paranoid psychoses (29 percent), epilepsy (26 percent) and agitated depressions (21 percent). The lowest incidence was in manic excitements (no case of sixteen), followed by depressions (one case of forty-one) and organic reaction type (6 percent). The one case of paranoia in the material was found to be without growth disorders.

5.—The proportion in the incidence of growth disorders between the clear cases of affective (manic-depressive) and schizophrenic psychoses is 1.7 percent to 36.4 percent. Statistical computation shows that this difference of 34.6 percent cannot be explained as due to chance sampling and that it therefore points definitely to a biologic correlation.

6.—Ten times as many cases with growth dis-

orders occur in agitated depressions as in simple depressions of manic-depressive type.

7.—The distribution of congenital malformations among the various psychopathologic groups conforms generally with that of the whole group of growth disorders.

8.—There is a certain parallelism between the frequency and rarity of bodily growth disorders in schizophrenic and affective psychoses, and the occurrence and absence of disharmonies in the mental development of the prepsychotic personalities suffering from these conditions.

Therapeutics of Viosterol

In *J. A. M. A.*, Aug. 31, 1929, Drs. A. F. Hess, J. M. Lewis and Helen Rivkin, of New York, give further clinical and laboratory experiences with irradiated ergosterol (viosterol) as a therapeutic agent. They have tested it in a large number of infants, varying in age from 3 to 9 months, both as a prophylactic and curative agent in regard to rickets, as well as for other conditions.

The results were well defined. Full-term infants were protected from rickets in almost every instance, except when too small dosage was given. Irradiated ergosterol must be regarded as one of the most remarkable of specifics. This was verified in every case, both by clinical and laboratory investigations, including analysis of the blood for calcium, and phosphorus concentration.

In the case of premature infants, viosterol, given in inadequate doses, will fail to protect them when growing rapidly. Such babies require very large amounts of viosterol.

The authors again point out that too much attention has been given to the occurrence of hypervitaminosis. This does not apply to irradiated ergosterol when used therapeutically, but only when overwhelming amounts are associated with excessive concentration of calcium in the blood. Further experimental work on animals, by the authors, has shown that hypercalcemia resulted only from doses ten to twenty thousand times greater than the minimal therapeutic protective dose. Hypercalcemia but rarely comes about in the course of the curative treatment of rickets.

The authors found no clinical evidence to support the view that the administration of viosterol in summer time (when heliotherapy may be considered as an adjunct) caused any hypercalcemia.

All the authors' clinical experiences with preparations of irradiated ergosterol have shown that it is a specific for rickets, tetany and osteomalacia.

A standard prophylactic dosage has been now established in the case of rickets. The dosage for premature and rapidly growing infants is

gaged differently. When these dosages are observed, neither toxic symptoms nor hypercalcemia need be feared. American preparations have been biologically standardized, so that they will have a potency 100 times that of a high-grade cod-liver oil. Eight (8) to 10 drops of this, daily, is the prophylactic dose for an infant growing normally. Premature and exceptionally rapidly-growing infants should be given 15 drops or more. The curative dose is 15 drops for mild and 20 drops for moderate rickets.

For bone conditions other than those named, the authors either have had no opportunities to test the value of irradiated ergosterol or else they have not found it of definite value.

Treatment of Hernia by Injections

The idea of treating hernia by injections is an old one; its object is to obliterate the canal by the formation of adhesions following seroplastic exudation.

In *M. J. and Rec.*, July 17, 1929, Dr. Jas. S. K. Hall, of New York, treats of the method originated by Dr. E. Pina Mestre, of Barcelona. The formula of the solution injected by Dr. Mestre combines the alcoholic tinctures of a number of official plants known for their stimulating and astringent qualities. Tannic acid is the principal ingredient.

Following experimental animal injections the author tried the method on human subjects. The injection is preferably made in the external abdominal ring. Thirty-three (33) patients with reducible hernia have been treated and in all but one eradication of the hernia due to closure of the ring by fibroses was effected.

Tinctures of the following plants are used: Catechu, monesia, krameria or rhatany, rosa canina, and vaccinium myrtillus or bilberry.

Diaphragmatic Pleurisy

A peculiar symptom characteristic of diaphragmatic pleurisy has been described by R. Schmidt, called the respiratory reflex of the abdominal wall: a lightning-like contraction of the upper part of the rectus muscle of the affected side—a symptom which appears during deep breathing.

Diaphragmatic pleurisy should be treated with codeine or morphine hypodermically for the pain; with high irrigation for the meteorism and dyspnea; 2 "cholopod" pills (podophyllin, rad. calami, extr. belladonn.) will take care of the bowel action. The cough can be controlled with codeine or morphine. Diet, during the fever period, should be liquid.—DR. E. E. MARCOVICI, New York City, in *Am. Med.*, March, 1929.

The Halogen Salts of Magnesium

From 1915 to 1929 continuous investigations have been made by Dr. Pierre Delbet, of Paris, and his confreres on the biologic activity of the halogen salts of magnesium. Several reports have been made on this subject to the Académie de Médecine, Paris, and to French medical journals. These reports have been collected in a booklet published by the Laboratoire de Pharmacologie, of New York, who are agents for the magnesium

halogen salt preparation which is named Delbiase.

Delbet claims, from his experimental and clinical work, that magnesium halogen salts are capable of exerting a profound influence on the organism, manifested by greater vitality and activity of the white corpuscles, by a greater resistance to a number of infections and deficiency diseases and—perhaps destined to be of monumental importance in the future—by an action on cancer that may be described as retardation of the development of malignancy.

Delbet's conclusions in regard to magnesium halogen salts in therapeutics are summed up as follows:

1.—Magnesium chloride permits or regulates certain syntheses which the absence of antiscorbutic vitamins prevents or disturbs.

2.—The halogen salts of magnesium exert a favorable action on general metabolism, which explains the multiplicity of their effects.

3.—The nervous system is an important consumer of magnesium. Clinical observations lead to the belief that many nervous disorders may be due to magnesium deficiency, and that decrease of the magnesium content of the organism may condition senility.

4.—The action of the magnesium salts on certain cutaneous lesions and their curative effect on certain dermatoses which are "veritable lesions of the precancerous type," coupled with animal experimentation, lead to the conclusion of a prophylactic action of these halogen salts of magnesium on cancer. It would seem then, as Delbet believes, that increase of the magnesium content of the diet might decrease the incidence of cancer.

Dangers of Diagnostic Lumbar Puncture

In *Arch. Neurol. and Psychiat.*, May, 1929, Dr. C. B. Masson, of New York, states that a study of 200 cases in which diagnostic lumbar puncture was performed gave the following results:

1.—In 94 cases of verified intracranial tumors, in all of which more or less well marked signs of increased intracranial pressure were noted, and in 62 of which the growths were supratentorial, the removal of a small amount of fluid by lumbar puncture did not give rise to any serious symptoms. Occasionally, as after any lumbar puncture, headache became more severe for a few days and, in one case, weakness and rapid pulse ensued for a few minutes.

2.—In 106 cases in which a tumor was suspected, but the diagnosis not verified, 79 of which were supratentorial, there was one instance in which serious symptoms followed the lumbar puncture and death occurred, possibly as a result of the withdrawal of spinal fluid. In the other 105 patients, symptoms of significance were not caused by the careful removal of fluid from the lumbar subarachnoid space.

3.—None of the patients with verified or suspected infratentorial new growths, in whom lumbar puncture was performed before the diagnosis of expanding disease in the posterior cranial fossa had been made or suspected, developed any untoward symptoms after the puncture.

Although lumbar puncture should not be

done in patients with symptoms of an expanding lesion beneath the tentorium, it is of interest that, in 59 cases in this series, of which 32 were verified tumors in or around the cerebellum, serious symptoms did not follow the withdrawal of a small amount of fluid by lumbar puncture. In most of the 59 patients, the puncture had been performed before the diagnosis of a sub-tentorial tumor was made or suspected.

The study of 200 cases of tumor of the brain, with increased intracranial pressure, led to the conclusion that, in such patients, there is no danger from diagnostic lumbar puncture, if it is carried out with the patient in a horizontal position and with a needle of small caliber, and if no more than 5 cc. of fluid is removed. If the fluid is found to be under considerable pressure, it should be allowed to escape slowly, and the patient should always be kept flat on the back in bed for twenty-four hours.

Sodium Amytal as an Anesthetic

Sodium amytal—sodium iso-amylethyl barbiturate—used intravenously, is one of the newest anesthetic agents. A number of favorable clinical reports of its application appear in the *Indianapolis Med. J.*, April, 1929. The drug may be used alone or in combination with morphine and atropine or with nitrous oxide and oxygen, or with ether. It is claimed that there is none of the postoperative nausea, vomiting or shock that accompanies ether anesthesia and that any degree of anesthesia may be obtained.

The technic, as worked out by Dr. G. Link from his experience in a number of cases, is as follows: Morphine gr. $\frac{1}{4}$ (16 mgm.) and atropine gr. $\frac{1}{300}$ (0.2 mgm.) are given, hypodermically, one hour before operation; immediately before operation $12\frac{1}{2}$ to 15 grains (0.81 to 1.0 Gm.) of sodium amytal are given, intravenously, in the patient's room. The patient is brought to the operating room and prepared without waking. When ready to make the incision, nitrous oxide and oxygen are given and continued until the operation is finished.

The technic of other operators differs. Dr. W. E. Gabe, of Indianapolis, who has tried sodium amytal as a general surgical anesthetic, arrives at the following conclusions concerning it:

1.—Sodium amytal, in the present state of our knowledge, is an ideal general anesthetic, in doses of 15 to 25 grains, used in conjunction with nitrous oxide and oxygen when necessary to obtain deep relaxation.

2.—It is pleasant of administration, relieves the patient of much of the fear of operation and is long-lasting in its after-effects, thus greatly diminishing postoperative discomforts.

3.—It is safe in cases with pulmonary complications, and is ideal in lung and brain surgery.

4.—It does not cause irritation to the respiratory passages, and hence its administration is not followed by mucus in the throat, cough and vomiting.

5.—With further knowledge concerning its elimination and lethal dose, greater amounts may be administered, with a view toward obtaining deeper relaxation with safety..

6.—It is desirable to find some drug that will rapidly counteract the effects of sodium amytal, for use should the emergency arise. Ephedrine and caffeine only partially do this. An anesthetic once injected into a vein cannot be retrieved.

7.—Sodium amytal may very possibly prove a revolutionizing factor in surgical anesthesia.

Milk Injections in Peptic Ulcer

In *Arch. Intern. Med.*, March, 1929, Dr. L. Martin reports that 24 patients with roentgenologic and laboratory evidence of peptic ulcer received, in some cases, 1 to 3 intramuscular injections of 10 cc. of nonspecific milk at weekly intervals; others received 1 to 7 similar injections at 2 to 3 day intervals. The treatment was ambulatory and the patients were kept on a soft diet.

Of the 24 patients (15 acute cases and 9 chronic) 17 (83.2 percent) were either cured or improved. Some of these patients had been sick for 15 to 20 years. The patients receiving injections at the shorter intervals showed better results.

New Serum Diagnostic Test for Cancer

In *Am. J. M. Sc.*, April, 1929, Dr. B. Gruskin, of Chicago, gives the details of a new serum diagnostic test for cancer, with preliminary results.

The theory is proposed that normal tissue equilibrium is dependent upon a balance maintained by the opposing action of lytic agents, produced respectively by connective tissue and epithelial cells, and that neoplasia is the result of a lack of such lytic agents on the part of the tissue invaded. The diagnostic test is based upon this theory.

The principle of the test rests upon the homologous relationship between embryonic cells and the sera of patients suffering from malignant disease.

The homologous nature of embryonic cells of different mammals has been demonstrated by the ability to develop amboceptors and antigens with embryonic cells of different mammals.

The test has been employed clinically in groups of cases. In 138 cases of known malignant disease, the test was positive in 131; faintly positive in 3; doubtful in 1; and negative in 3. In 348 cases of non-malignant disease, the test was negative in 339 and positive or faintly positive in 9. In 146 normal adults the test was negative in 143 and positive or faintly positive in 3.

The author claims that the foregoing results substantiate the proposed theory and validity of the test, which he believes to be of practical importance in the serodiagnosis of carcinoma and sarcoma.

This test differs fundamentally from others of a similar kind in the following ways: (1) Because the test is purely biologic in character; and (2) because the amboceptor is produced by means of purely embryonic cells.

Most of the serodiagnostic tests in which tissue cells have been used have been performed

with an antigen composed of both epithelial and connective tissue cells. When the theory upon which this test is based is considered, it is readily seen that the presence of adult connective tissue detracts from the specificity of the antigen and it is suggested that this factor may be responsible for the better results obtained with the more cellular growths.

The Barraquer Cataract Operation and Its Simplified Form

The Barraquer suction cataract operation has been simplified by Fisher, of Chicago, especially by using a conjunctival flap and the delivery of the lens by lifting it direct from the eye without turning it over. The iridectomy is also simplified.

In *Arch. Phys. Therapy, X-Ray, Radium*, June, 1929, Dr. O. B. Nugent, of Chicago, states that he has personally been performing the modified Fisher-Barraquer technic for about 2 years and has found the results to be far better than with any other method. The tying of the conjunctival flap suture before the iridectomy is made gives the pupil a chance to contract, making it easier to perform and at the same time furnishing greater protection against vitreous loss.

Prognosis in Hay-Fever

In *Am. J. M. Sc.*, Mar., 1929, Dr. F. M. Rackemann reports on the prognosis of hay-fever, based on the observation of 410 patients in the Anaphylaxis Clinic of the Massachusetts General Hospital.

Permanent cure of hay-fever does not depend upon the exact mode of treatment.

In the 410 cases of ragweed hay-fever observed, relief of symptoms, which appeared to be complete and permanent, occurred in 26 patients—6.3 percent. This relief has persisted for an average duration of 4.6 years.

The cure does not depend upon the total number of years of treatment nor does it, apparently, depend upon a particular technic of treatment.

"Cures," among patients with early hay-fever, occur in 7 percent.

Inasmuch as skin tests may be positive, in the presence of long-standing and complete relief, "cure" must be, in most cases, a clinical rather than an immunologic phenomenon.

Premature Infants

From the results of a study of 102 premature infants, (including 36 complete autopsies), by Dr. Norman W. Clein, published in *Am. J. Dis. Child.*, April, 1929, it was found that infratentorial hemorrhage occurred in 50 percent of the cases (36) in which necropsy was performed; otitis media in 16.6; atelectasis in 8.3; syphilis in 11.1; and tuberculosis in 5.5 percent.

Pathologic lesions other than the chief lesion usually do not produce any characteristic clinical symptomatology.

Atelectasis and infratentorial hemorrhage affect chiefly the most immature infants, and these conditions usually cause death within the first three days.

Acquired infections occur in older and heavier

infants, usually after the first two weeks. Infants with syphilis and tuberculosis were older and heavier and died at a later stage than the infants in the other groups.

High Concentrations of Oxygen in Respiratory Diseases

The administration of very high concentrations of oxygen has been considered dangerous, although within recent years it has been shown that such a view is erroneous.

In *Amer. Med.*, April, 1929, Dr. J. H. Evans, of Buffalo, following his clinical experience in 47 cases of pneumonia, as well as a fair number of patients with cardiac decompensation, asthma, etc., gives his opinion that the continuous administration of 100-percent oxygen to anoxicemic patients, over periods as long as from several hours to 18 days, has proven beneficial and, clinically, without ill results.

The 100 percent of recoveries in the pneumonia group, where the oxygen was administered early, shows the advisability of employing oxygen therapy as soon as the diagnosis is made, whether cyanosis is present or not.

The inhalation of pure oxygen for one to several hours a day has been beneficial in cases of cardiac decompensation, asthma and hay fever.

The author has used the specially designed McKesson apparatus, which conserves the amount of oxygen used as it has an automatic shut-off that prevents the flow of oxygen during exhalation. The apparatus is attached directly to a large "K" size cylinder of commercial oxygen, holding 220 cubic feet. Attached to the apparatus is a rubber bag to store the oxygen, in readiness for each inhalation. There is little, if any, rebreathing. Leading from the apparatus is a breathing tube of large caliber, at the end of which is attached either a face mask, which covers both nose and mouth, or a nasal inhaler which covers the nose only. This apparatus can be attached and ready for operation in from 2 to 3 minutes.

Liver Extract in the Treatment of Hypertension

Drs. T. L. Althausen and associates, in *Am. J. Med. Sc.*, March, 1929, reports the results of important research work done in the University of California Medical School, regarding the value of liver extract in hypertension.

The treatment of a group of 25 hypertensive patients with liver extract brought about a considerable lowering of the blood pressure and afforded complete or marked symptomatic relief in a majority of cases.

Hypertension cases of known duration under 2 years, without marked arteriosclerosis and showing no fixation of specific gravity in the Mosenthal test, offer the best prognosis.

The liver extract was injected intramuscularly, beginning usually with 0.5 cc. and increasing gradually to a maximum of 5 cc. Injections were given three times a week.

The immediate effect of a single injection of liver extract in hypertension cases is to produce

a fall in the systolic and diastolic blood pressure. The extent and duration of this fall are, within limits, in proportion to the dose in the same patient, but vary greatly from case to case. After repeated injections of liver extract, in 27 consecutive cases of hypertension, it was found that, in 17 cases, or 63 percent of all cases, a reduction of the average systolic pressure, amounting to 10 mm. or more, took place. The average reduction of systolic pressure in these cases was 32.7 mm. The diastolic pressure in the same cases was reduced by an average of 18.9 mm.

Out of 25 patients who had symptoms referable to hypertension, definite relief was obtained by liver-extract therapy in 19 cases, or 76 percent of all cases. Headache was the most common complaint and marked or complete relief from it was reported in 80 percent of cases that had it.

Age, sex and the degree of hypertension proved to be immaterial in determining the success of liver-extract therapy. On the other hand, the duration of hypertension prior to treatment was found to affect very markedly the prognosis of therapy, inasmuch as patients who did not obtain reduction in blood pressure or symptomatic relief were known to have had high blood pressure much longer than those who did.

The presence or amount of cardiac damage was of no significance, so far as the success of the treatment was concerned. Arteriosclerosis and its degree, if present, were of great importance in predicting the outcome of treatment, since none of the patients without arteriosclerosis failed to obtain symptomatic relief, and only in 1 such patient did the blood pressure remain elevated. Conversely, marked arteriosclerosis was found to influence the outcome of the treatment unfavorably, especially in relation to lowering of the blood pressure.

No undesirable symptoms referable to reduction of hypertension were observed in any case.

Acriflavine Hydrochloride and Acriflavine Base.

Since 1919 the Council of Pharmacy and Chemistry of the American Medical Association has been studying acriflavine hydrochloride and acriflavine base, as it has been alleged that foreign made brands of these products were superior to the domestic.

The Association's Chemical Laboratory has now standardized these two drugs. As a result of the investigation of American and European brands they have found that there is not sufficient difference to justify the statement that the foreign are superior to the domestic brands.

The investigations demonstrated that acriflavine hydrochloride solution is distinctly acid in character and physicians should not lose sight of the fact that the solution will have the characteristics of a dilute solution of hydrochloric acid as well as that of a dye. Even a solution of acriflavine base ("neutral" acriflavine) has the characteristics of an acid solution, though in a much lesser degree. The terms acriflavine hydrochloride and acriflavine base have been adopted by the Council of Pharmacy and Chemistry of the

Association to distinguish them from the general term, acriflavine, and physicians should use these distinct terms in their prescriptions instead of merely acriflavine.

Ephedrine as a Mydriatic

Several very favorable reports have appeared in the literature regarding the value of ephedrine as a mydriatic. The researches of Drs. K. K. Chen and E. J. Poth, of the Johns Hopkins University, discovered that ephedrine was more valuable as a mydriatic for Caucasians than for Chinese.

In *Am. J. Med. Sc.*, Aug., 1929, these writers make a further report of the effect of ephedrine on Caucasians, using a 10-percent solution of ephedrine sulphate, with the addition of 0.1 percent of homatropine hydrobromide or 0.1 percent of atropine sulphate as a mydriatic for routine ophthalmoscopic examinations.

The results showed that ephedrine is a harmless mydriatic and its action does not interfere with the accommodation. In nonglaucomatous eyes it does not raise the intraocular pressure, but in cases of glaucoma it may precipitate acute attacks. However, in glaucoma every mydriatic is dangerous.

In general, findings are that ephedrine, in combination with homatropine or euphthalmin, is a harmless, convenient and efficient mydriatic for Caucasians. It has a short duration of action. Only in uveitis and iritis does it fail to dilate the pupil.

Ultraviolet Rays in Dental Disease

H. G. Frankel, D.D.S., of St. Louis, writing in *Arch. Phys. Therap., X-Ray, Radium*, Jan., 1929, considers that ultraviolet irradiation is specifically indicated in the following conditions in dental surgery:

All cases of dental caries; all infections of teeth and gums, including gingivitis, ulcers, cellulitis, periostitis, Vincent's angina and acute alveolar abscess; in inflammations of the periodontal membrane; in neuralgia, pyorrhea, post-operative pain, postoperative infection, orthodontia and faulty development of body tissue due to lack of calcium.

About 85 percent of dental disease is carious in nature, and, as caries is known to be directly associated with a negative calcium balance, it seems only rational that ultraviolet treatment is indicated in practically every case.

Dr. Frankel believes that ultraviolet is as valuable in dentistry as it is in medicine, and the sooner the physician and dentist realize this fact, the better equipped they will be to give the most efficient service to suffering humanity.

Jarotzky Diet for Gastric Ulcer

Jarotzky, of Moscow, has formulated an interesting diet for gastric ulcer. He excludes milk entirely and gives raw egg whites, without salt, and unsalted butter, separately, in the course of the day.

For decreasing gastric hypersecretion he gives

a semi-liquid diet consisting of starches and fats, purees and gruels of cereals and vegetables—potatoes, carrots, cabbage, turnips, etc.—passed through a sieve. Sweetened gruels and purees of fruit are permitted, but no milk and a minimum of animal proteins.—*Gazette Hebdomadaire, Abst. in Am. Med., March, 1929.*

Early Symptoms of Gastric Cancer

In *Canad. M.A.J.*, May, 1929, Dr. Wm. Goldie, of Toronto, gives the results of the analysis of 137 cases of gastric carcinoma, in regard to the early symptomatology, and draws these conclusions:

1.—Suspect carcinoma in every individual of forty years or over who has any form of gastric disturbance, until you can prove that the cause is not carcinoma.

2.—Individuals of forty years or over suffering from general failure, without evident and obvious cause, must be suspected of having carcinoma until you can prove otherwise.

3.—Gain in weight and relief of symptoms under treatment must not halt the investigation.

4.—The findings from examination of the stomach contents during the early symptomatic stage are more misleading than helpful.

5.—In the early symptomatic stage, the most helpful aid at our disposal is x-ray examination by a persistent expert.

6.—If there is no proof that the symptoms arise from other cause or causes, persuade the patient to discuss the problem in consultation with a surgeon.

Unusual Complication from *Ascaris Lumbricoides*

Intestinal infestation with *ascaris lumbricoides* is very common in children but severe complications due to the parasite are rare.

In *Canad. M.A.J.*, May, 1929, Dr. L. A. Middleton, of Montreal, reports a very unusual complication. The patient was a boy of 4 years and examination led to the diagnosis of pneumonia, right otitis media and meningitis. The child died 12 hours after admission to hospital.

Autopsy showed extensive intestinal ascariasis, with an *ascaris lumbricoides* in the lower lobe of the left lung and early gangrene of this lobe; also perforation of the left visceral pleura, early left empyema, bilateral bronchopneumonia and right otitis media.

Cesarean Section

In *Illinois M. J.*, May, 1929, Dr. I. H. Bacon, of Peoria, gives his experiences derived from 60 cesarean sections. He writes as a surgeon with but little obstetric experience.

The indications for cesarean section are being constantly extended.

In his series there have been 3 maternal infections but no case of general peritonitis. There were 2 deaths, one from continuous convulsions in a nephritic patient. The second was from exhaustion in a tuberculous primipara of 35 years who had been in labor 35 hours. In only 3 cases was a stay of over 3 weeks in the hospital

necessary. The morbidity following section has, in the author's experience, been less than that in high forceps deliveries.

In regard to technic, some special points are: painting the abdomen with 5-percent alcoholic solution of picric acid; packing firmly around the uterus with large gauze packs wrung out of hot saline solution as soon as the abdomen is opened; packing the uterus after extraction of the child and placenta with iodoform gauze, which is removed through the vagina after five days.

In regard to the question of the frequency of vaginal examinations as a contraindication of section, the author thinks that much depends upon the presence of a pus discharge and the carefulness with which the examinations are made. All doctors practicing obstetrics should be urged not to destroy the possibility of a section in their serious cases by carelessness in their asepsis in making vaginal examinations. A rectal examination might do.

The author thinks that the adage: "Once a cesarean always a cesarean" is not strictly true. In a subsequent pregnancy these patients might be allowed to have a trial of labor in a hospital under watchful care.

The author looks for a greater extension of cesarean delivery in the future, owing to its many advantages in regard to mortality and morbidity.

Dental Medicine

(The Mouth as an Autobiography)

In the *Practitioner*, June, 1929, Dr. F. W. Broderick draws attention to the mouth as a barometer of the general metabolism of a patient and as an index of his diathesis. He thinks that dental caries and pyorrhea do not result from infections or from any conditions of the teeth themselves, but that the underlying conditions are metabolic disturbances, behind which and in a casual relation are endocrine dysfunctions. The underlying causes must be the ones to which attention should be paid.

The presence of carious cavities is indicative of a tendency, either now or at some past time, to an acidosis of a greater or less severity, and the presence of pyorrhea pockets demonstrates the existence of a present or past alkalosis.

Infection by microorganisms is not a simple matter of the invasion of tissues: but the resistance of the individual—his diathesis—is as important, if not more important. The diathesis fixes the time and place when infection will become manifested.

The presence of caries or pyorrhea is evidence of a systemic upset and the state of the mouth becomes an important feature in the diagnosis, prognosis, treatment and prevention of disease.

This conception of disease, built upon the biochemical condition of the soil, rather than upon the bacteriologic idea of the invasion of the body by microbes, removes many of the difficulties that are encountered in the consideration of chronic infections.

Too much attention is being given today to sources of infection and too little to metabolic disorders, with the result that organs are being unnecessarily and uselessly sacrificed.

Much can be learned regarding the status of metabolism, in any individual, from a study of the mouth and the oral secretions. The work of an intelligent dentist should not consist entirely of repairing, removing or replacing damaged teeth, but that, through a study of mouth conditions, he may become a helpful colleague of the medical practitioner, in a medical as well as a surgical capacity. There is a science of dental medicine as well as of dental surgery.

Rheumatic Fever.

On March 9, 1929, Dr. H. F. Swift, of the Rockefeller Institute for Medical Research, delivered the Hektoen lecture before the Institute of Medicine in Chicago upon the subject of Rheumatic Fever, (*J.A.M.A.*, 92, 2071, June 22, 1929).

This disease may appear either as a single more or less severe attack characterized by a rising fever, toxemia and sweats, or as a series of such attacks. The latter series of cycles is strongly suggestive of the ebb and flow of balance between infection and resistance. There are still other cases where no regular course is followed and there is no evidence of the development of a natural resisting mechanism.

"For more than a century the importance of visceral so-called complications has been discussed, but more recent studies have emphasized the fact that these visceral involvements are just as much a part and parcel of the infection as is arthritis. Therefore, just as arthritis and fever may be present without obvious visceral disease, so may there be other manifestations without the arthritis."

Swift stresses the closely allied natures of chorea and rheumatic fever, especially as related to the frequent cardiac damage associated with both. Other conditions frequently found in the same symptom-complex are: tonsillitis, nephritis, bronchopneumonia, pleurisy and infections of the intestinal tract.

The histologic characteristics of rheumatic fever, for instance the subcutaneous nodules, may be pictured as a type of response to the focal destruction of some tissue. This may be followed by the exudation of fluid and cells, so that synovial cavities become distended with fluid having a heavy fibrin content. That is, in rheumatic fever there is an exudative and proliferative tissue reaction which often appears to be out of proportion in intensity to tissue necrosis. Localization would seem to be partly determined by tissue stress and strain. It is not surprising that the vascular system, and particularly the valves of the heart, should be found so frequently damaged.

Support is given by Swift to the theory that deep interstitial inflammation occurs in practically all of the valves of the left heart, and in some of those of the right heart, during rheumatic carditis.

Inasmuch as streptococci are encountered in practically all throats, observed freedom from arthritis in children under 2 or 3 years (or more) suggests that, if streptococci cause the disease, the tissues must be prepared to react in the manner characteristic of rheumatic fever. The same theory is supported by the fact that

most children with chronic respiratory infection do not develop rheumatic fever.

These conceptions do not, of course, rule out the parts played by climatic and dietetic conditions, but merely place them in positions of secondary importance. Of interest in this connection are the observations of McCulloch and Irvine Jones, that rheumatic children show but little tendency to recurrence of their infection when they are in special convalescent homes and schools, but when such children return to their homes they are more subject to relapse than children who have not been sent away.

Inasmuch as it seems quite impossible to account for the observed phenomena either upon the basis of elective bacterial localization, or upon the elaboration of a specific toxin by specific streptococci, the so-called "allergic theory" has found widespread favor.

Swift and his associates have found that, following the establishment of focal lesions in rabbits by the injection of certain nonhemolytic streptococci or by the production of cutaneous lesions, sinusitis or arthritis, the rabbits respond by marked edema and exudation to very small intracutaneous doses of streptococci.

On the other hand, rabbits first inoculated intravenously show none of these reactions of hypersensitiveness, but instead give smaller lesions than do normal animals under the same conditions. By intravenous inoculations of proper size, the hypersensitive animal's reactivity could be made to pass over to that of the nonsensitive or immune state. The capacity of such focal lesions to prolong the hypersensitive state was found to be a peculiarity of the nonhemolytic streptococci; with hemolytic types, even intracutaneous inoculations gave decreasingly severe reactions. There was no indication of specificity among different strains of nonhemolytic streptococci.

These experimental demonstrations of two types of reactions toward the same streptococcus are transferred to the clinical conditions of rheumatic fever and streptococcus endocarditis; the former being characterized by a marked tissue reaction, the latter by hyposensitiveness.

On the basis of this theory, Swift indicates the three most logical steps in the treatment of rheumatic fever:

- (1) Stopping the production of new foci of infection.

- (2) The elimination of foci already present.

- (3) Intravenous desensitization or immunization with suitable antigenic substances.

In brief, the important problem is the building up of immunity, so that the liability to renewed infection will be lessened or, if renewed infection occurs, the reactivity of the tissue will approximate that of immunity.

Incidence of Seminal Vesiculitis

Dr. Jas. F. McCahey, of Philadelphia, in *Urol. and Cut. Rev.*, June, 1929, reports that, of 47 cases of gonorrhea, in which the seminal vesicles were not palpable on first rectal examination, 4 (8.5 percent) developed evidence of seminal vesiculitis within the first six months of the infection.

Of 42 cases of gonorrhea, in which the sem-

inal vesicles were palpable on first rectal examination, 16 (38 percent) developed evidence of seminal vesiculitis within the first six months of the infection.

Of 36 cases examined six months or more after a gonorrhea, in which the seminal vesicles were not palpable on rectal examination, 1 (2.6 percent) had evidence of infection of the seminal vesicles.

Of 19 cases examined six months or more after a gonorrhea, in which both seminal vesicles were palpable on rectal examination, 15 (78.9 percent) had evidence of infection of the seminal vesicles.

Syphilis Acquired Innocently by Physicians

It is not a rare thing to find a physician who has innocently acquired syphilis in the course of his professional duties.

In *Urol. and Cut. Rev.*, June, 1929, Drs. G. Mestchersky and J. Ollesoff, of Moscow, Russia, report 5 cases of this kind which they have observed in their hospital. In all cases the initial lesion was on the hand, and had been acquired either during examination of or operation upon a syphilitic subject.

The order of frequency of such lesions is: (1) obstetricians, (2) gynecologists, (3) surgeons, (4) syphilologists.

The causes are to be regarded as, general incompetence of physicians in regard to syphilis and lack of proper precautions in professional manipulations. It is essential that, in dealing with syphilitic subjects, rubber gloves be worn, and, in dealing with syphilitic lesions about the oral cavity or throat, the physicians' face should be covered with a protective mask. If by any chance infected, the physician should seek relief at once.

A New Dieting Treatment of Obesity

In *Am. J. M. Sc.*, March, 1929, Drs. F. A. Evans and J. M. Strang, of Pittsburgh, on the basis of the results observed in 111 treated cases, state that, if sound metabolic principles are followed, obese patients can be kept for weeks on diets containing less than 7 calories per kilogram of the patient's weight.

As an example of the distribution of food elements in a case they give:

Protein	Grams 60.....	Calories 240
Carbohydrates	" 45.....	180
Fat.....	" 29.....	261

Total681

This distribution represented 8.5 calories per kilogram.

A model menu for one patient, and the instructions appended to all menus are as follows:

Breakfast: 1 egg; 1 ounce bread.

Lunch: 1 egg; 4 ounces vegetables, as listed.

Dinner: 1 cup bouillon (if desired); 3 ounces lean meat (weighed after cooking); 4 ounces vegetables, as listed.

Acceptable vegetables: Lettuce, cucumbers, spinach, asparagus, endive, celery, mushrooms, tomatoes, brussels sprouts, watercress, cauli-

flower, radishes, cabbage, onions—very sparingly.

1.—If the bread is eaten as toast, it must be weighed before toasting.

2.—Eggs may be taken boiled, poached or raw.

3.—Meat may be boiled, broiled or roasted.

4.—No fried foods may be eaten.

5.—No lard or butter may be used in cooking.

6.—Vegetables must be prepared without milk, oil or egg dressing.

7.—Water may be taken as desired.

8.—Salt, pepper and vinegar (not lemon juice) may be used as desired.

9.—It is just as important that all this be eaten as that nothing on the list be taken.

10.—Take a level teaspoonful of soda, in a half-glass of water, twice each day.

The 111 patients treated lost weight rapidly, with nothing but the most gratifying results. They were not hungry; they were cheerful; headaches were relieved and elevated systolic blood pressures were reduced.

The corpulence of "endocrine obesity" yields to dietary measures, as well as that of the alimentary type. Endocrine products are, therefore, not indicated in the treatment of the symptoms of these patients.

Treatment of Bronchiectasis

Dr. L. Eloesser, of San Francisco, in *North-west Med.*, June, 1929, gives the following as his conclusions from a study of the treatment of bronchiectasis:

1.—Treatment of bronchiectasis should begin with clearing of the nose and sinuses of infection.

2.—Simple, uninfected bronchiectases should have the upper respiratory tract cleared; otherwise they should be let alone. They are symptomless.

3.—Simple, infected bronchiectases may be given a trial with pneumothorax, combined, if necessary, with phrenic avulsion.

4.—Complicated bronchiectases, in patients unable to withstand severer procedures, may be opened with the cautery.

5.—Complicated, unilateral bronchiectases, in fairly robust patients, may be treated by lobectomy, done in two or more stages, the chest being left open and the hilus fixed with clamps, sutures or packing.

6.—Toxicosis, sepsis, cyanosis and marked dyspnea contraindicate operation on the chest wall: they may permit the performance of pneumothorax or avulsion of the phrenic nerve.

Acetylcholine

Choline is a base that has been isolated from numerous animal and vegetable tissues. Its main pharmacologic actions are those of lowering blood pressure and of stimulating intestinal peristalsis. Acetylcholine is the acetyl derivative of choline and possesses the properties of choline in a much more powerful degree. Its action as a vasodilator has been found to be 100,000 times as powerful as that of choline, while its toxicity was only 3 times as great.

The recent literature of the subject is reviewed in an editorial in *The Prescriber*, April, 1929.

In most respects the action of the drug is directly opposed to that of adrenaline (epinephrin). It is of value in Raynaud's syndrome, in the gangrene of arteritis, and in troubles of like nature. In 10 or 15 minutes after its administration the extremities recover their normal color. In all troubles arising from arterial hypertension it frequently gives good service. The drug promises to be of some value in angina pectoris, in lead colic, and its action on intestinal peristalsis suggests its use in habitual constipation.

Acetylcholine, when properly administered, is stated to be a safe and valuable therapeutic agent for the conditions named and others. It is prepared in the hydrochloride form, a powder which forms a stable solution in water. The dose is 0.05 Gm. the first day and 0.1 Gm. the following day. If, in ten days time, the results are inadequate, a dose of 0.2 Gm. may be given twice daily, but usually the single daily dose of 0.1 Gm. is sufficient.

At present, acetylcholine hydrochloride is a French proprietary synthetic preparation. It is supplied in ampules containing 0.1 Gm. of the dry salt, accompanied by ampules each containing 5 cc. of doubly distilled water for the solution. It is administered by subcutaneous or intramuscular injection.

Ephedrine Dissolved in Gomenol for Allergic Conditions

Gomenol, an essential oil extracted from the melaleuca grown in New Caledonia, has been extensively used for instillation into the bronchial tree in various types of bronchitis and bronchiectasis. In *Canad. M.A.J.*, May, 1929, Dr. A. H. W. Caulfield, of Toronto, reports excellent results in cases of bronchitic asthma treated by a combination of ephedrine and gomenol.

The method adopted has been to instill into the trachea about 2.0 cc. of ephedrine (from 1 to 1.5 percent) in gomenol (10 to 20 percent) by the supraglottal method, using a Yankhauer laryngeal syringe. Several weekly or bi-weekly instillations have been given without any evidence of unfavorable results.

The instillation of this oily solution has been tried in 17 cases. In only 2 cases has it been without favorable effect; in 6 the favorable effect was considerable and in 9 of pronounced benefit, as contrasted with methods previously employed. The favorable effect presumably due to the ephedrine has been prolonged by this method up to about 6 days.

Clinical Genetics

In *J.A.M.A.*, June 29, 1929, Dr. Geo. Draper and associates, of New York, discuss the importance of heredity in clinical medicine.

The family trees of considerable groups of patients, suffering from the same disease or type of disease, were studied. This study showed that there was a justifiable basis for the ancient saying that "blood will tell," in diseases as well as in other human capacities. For instance, there were 30 unrelated male patients with inguinal

hernia. In these 30 families there was a total male population of 253 whose disease histories were dependable. Of them, 61 or 24.11 percent have had hernia.

Studies of this kind offer powerful support for the empiric belief that characters of plants and animals breed true and exert an inexorable force for good or evil in the lives of individuals. In the analysis of a patient's constitution, therefore, the physician may find inquiry into the genetic background of inestimable value.

Identification Card for Diabetics

Since the introduction of insulin, many diabetics have been enabled to lead almost normal active lives. But, occasionally, such persons suffer an unexpected insulin reaction or may be the victims of accidents which bring them unconscious to hospitals. For many reasons it is very desirable that all such persons should be recognized as diabetics and it is suggested that they be provided with an identification card of the following type:

DIABETIC CARD

Name
 Address
 Telephone
 Family doctor..... Tele.....
 Diabetes specialist..... Tele.....
 Diet: Carbo.....Gm.; Prot.....Gm.; Fat.....
 Gm.; Cal.....
 Insulin: A. M.....units; M.....units;
 P. M.....units.

(This card is carried so that in case of emergency or accident the patient may receive the proper attention quickly and mistakes may be avoided.)

—DR. H. J. JOHN, Cleveland, in *J.A.M.A.*, June 29, 1929.

Diagnosis of Disease of Bone

Dr. Jos. C. Bloodgood, of Baltimore, in *Illinois M. J.*, April, 1929, gives his opinion that the diagnosis of early bone disease is becoming more difficult. The difficulties of differential diagnosis are due to the opportunities to examine and make an x-ray study of bone lesions at a much earlier period after their onset than formerly.

Dr. Bloodgood gives the following as a working rule in diagnosis: Take an x-ray picture, not only of the involved bone but of its opposite, and always of the chest and pelvis as well as of the skull, in order to exclude Paget's disease and multiple lesions of the skeleton. Never neglect to look for Bence-Jones bodies in the urine (for multiple myelomas, especially).

Take the blood Wassermann test, total and differential leukocyte counts; look for foci of infection in the teeth, tonsils and sinuses; think of tuberculosis of the lungs; search for a primary tumor; remember that traumatism may produce an ossifying periostitis or myositis simulating periosteal sarcoma; in the small pipe-bones, the

bone-forming, spindle-shaped, periosteal shadow is usually a fracture and not a sarcoma.

Present amputation and resection to the patient or family in such a way that patients can be given the benefit of a biopsy which will lead to amputation or resection (as the operations of choice) if the lesion is sarcoma. If the situation of the bone lesion and its character indicate that amputation or resection offer no assurance of a cure, then try radiation and do not give the patient or family anxiety by suggesting malignant disease.

The author records 3 cases of five-years cure of sarcoma by radium treatment, in which amputation could not be done with any assurance of help. There are cases reported by others in which malignant lesions have apparently been cured up to this time in the same way. The probability of the cure of bone sarcoma in its early stages has been increased by about 30 percent, when the lesion is resectable in the upper extremity, or when it is situated below the middle third in the lower extremity.

Obstetric and Gynecologic Risks

From a study of the records of the University of Michigan Hospital, in order to determine the factors influencing operative risks, Dr. R. Peterson, of Ann Arbor, in *J.A.M.A.*, June, 8, 1929, estimates that the risks are based on two factors; the nature of the operation and the condition of the patient.

When the patient's condition is good and the operation is one which experience has shown can be performed reasonably quickly and without undue loss of blood, any fatality must be explained.

A poor risk is one in which an operation must be performed, but in which the patient's chances for survival are not good or even fair. Patients with histories of long-continuing suppuration, from whatever source, are poor operative risks. Fair risks are between the good and poor, and more explanation must be made for a fatality following a risk estimated as fair than when it has been judged as poor.

The author, while not out of sympathy with the attempts being made to standardize operative risks in hospitals, thinks that the responsibility should rest on the surgical staff of the hospital. It is in the best interests of every hospital to reduce its operative mortality. Making the estimated risk a part of the hospital record and publication of statistical results, will help to bring about the best conditions.

The Deadly Upper Lip Infection

In *Illinois M. J.*, April, 1929, Dr. H. J. Jurgens, of Quincy, Ill., draws attention to the danger of surgical incision in upper lip infections. A rapidly fatal result is very frequent in such circumstances.

The reason for the danger is that, in the case of the upper lip and nose, there is no underlying superficial fascia and the fibers of the facial muscles lie directly under the skin. The blood and lymph vessel supply of the region is very extensive, the vessels running between the delicate fibers of the facial muscle. Venous drainage is

rapid and direct and infection may spread by the angular and superior ophthalmic veins to the cavernous sinus; by the main branch of the anterior facial to the internal jugular vein and thence to the heart and lungs; by the small nasal vein to the longitudinal sinus; or, finally, by infection of the general blood stream, through extending cellulitis and lymphangitis.

There are other factors which limit leukocytosis in this region and thus favor rapid multiplication of infecting germs.

The danger arising from infecting lesions in this region necessitates great care in treatment. In the beginning, infections about the face call for abstinence from all radical methods of treatment, especially opening and squeezing. Physiologic rest should be required, including liquid diet, for lesions on the lip. Hot, moist dressings (hot boric acid solution) should be applied to the lesion, which should otherwise be left alone.

If the infection travels to the longitudinal sinus there is no hope. If spreading is by the angular vein, a ligature of the ophthalmic vein, just below the inner canthus, may save the patient; likewise it may be possible to ligate the facial vein at the angle of the jaw in time, if the infection travels that way. If spreading of infections is by contiguity, early incision of the indurated tissue of the neck and hot applications may be effective.

The important thing for the practitioner is to recognize the danger from such infections and to be eternally vigilant when he meets with one.

Quartz Lamp Therapy in Rickets and Spasmophilia

Drs. H. J. Gerstenberger and J. I. Hartman, of Cleveland, in *J.A.M.A.*, Feb. 2, 1929, state that observation in 13 rachitic and spasmophilic infants shows that weekly exposures to the ultra-violet rays produced by the quartz lamp, in doses of 1 erythema unit (at lamp distance of 80 cm.) for colored and less for white infants, to both front and back, bring about healing in practically the same time required by the heavier schedules at present generally used.

A Critical and Experimental Study of Diathermy

Dr. L. E. Pariseau, of Montreal, in *Canad. M.A.J.*, Feb., 1929, as the result of a number of special physical experiments, reports that, contrary to some opinions, diathermy currents of the frequency used in medical practice do not flow over the surface of colloid-saline masses; they go right through and heat all through.

"Skin effect" need not be a bugbear nor a deterrent. Superficial hot spots and "edge effects" are manifestations of an uneven electrical field rather than of poor contact or sharp edges. "Maximum heat at the center" is a misleading slogan. In a homogeneous, unobstructed and unobstructed electrical field the greatest heating effect is always to be found near the electrodes and not half way between them.

The blood stream tends to nullify the deeper local effects of diathermic currents, but the in-

teraction of both superficial and deep circulation with the heat regulating centers of the body could easily reverse the heat gradient observed in some of the author's experiments. When and within what time this occurs is a question that cannot be solved by "in vitro" experiments.

Periodic Health Examinations

For the past two years, the experiment has been tried at Harvard University Medical School of making a teaching exercise of the students' annual health examinations. The methods and results are given by Dr. R. Fitz, of Boston, in *J.A.M.A.*, May 18, 1929.

About 500 men have to be examined and taught about periodic health examinations, only about one-fourth of whom are capable of making such an examination under supervision. Picked men, of the third and fourth years, examine the juniors and each other.

The records consist of a medical history form, filled out by the student, and of the physical examination form, made out under supervision, as stated. When the student has completed his examination, the director or his assistant checks up the important findings. Besides the physical examination, laboratory data are found later and filled in on the record. Special examinations are made when necessary in particular cases.

Dr. Fitz, as director, is satisfied that these examinations are of great value to the students and that they are deeply interested in them and cooperate in every way. They go over their own records and keep tab on their shortcomings or organic defects.

Ivory Implants in Atrophic Rhinitis

Since the etiology of atrophic rhinitis is not specifically known its treatment is palliative only.

In *Illinois M. J.*, June, 1929, Dr. L. B. Bernheimer, of Chicago, calls attention to the superiority of ivory over other transplants for reducing the much increased intranasal space.

Spindle-shaped plates of ivory, from 2 to 3 cm. long, 0.25 to 1 cm. wide, and 0.12 to 0.5 cm. thick, are prepared, perforated and sterilized. They are introduced by submucous resection between the mucoperichondrium and the cartilage, in separate pockets rather than one large piece, which would not be so well tolerated. A light pack is all that is necessary to keep the pockets closed.

This operation has been found simple in practice and the results satisfactory, although only palliative.

In discussion, Dr. H. Pollock mentioned that he had observed durable cures from such ivory transplants.

Small City Health Problems

In *Illinois Med. J.*, June, 1929, Dr. W. F. Burres, Urbana, mentions the following as some of the health problems in a small city: The city dump for refuse—garbage should be burned or buried; the use of alleys for waste and garbage; faulty building supervision of basement drainage in homes—blocks of small drains flowing

into an inadequate outlet should be remedied; every small town should have some sort of an isolation hospital, not necessarily large or costly; the city alley should be abandoned in all residential districts.

The public health officers should be adequately paid; in most cases an entirely insufficient amount of the taxes is allotted for the public health. If possible, the public health officer should be a full-time official.

The only proper way to obtain a due regard for the importance of public health matters in a city government is for some of the physicians to be members of the city council. Such members could demand and command public health necessities, not beg them or leave them to the chance of attention by altruistic societies or agencies. In any case, cooperation between the medical profession and the public health department is extremely valuable.

Rural Medical Service

A questionnaire sent out recently by *The Farmer's Wife*, St. Paul, regarding medical service in the country, produced 860 replies from which the following interesting figures are taken.

	Average Persons
Number in the family at home.....	4.64
	Miles
Distance to nearest doctor.....	7.03
Distance to nearest dentist.....	14.25
Distance to nearest hospital.....	17.09
Distance to nearest drug store.....	11.0
Doctor's fee for office visit.....	\$ 1.59
Doctor's fee for home call.....	7.63
Doctor's fee for confinement.....	28.33
Amount paid family doctor last year.....	29.35
Amount paid other doctors last year.....	19.23
Amount paid dentist last year.....	19.23
Amount paid for medicine last year.....	7.21

Total expense due to sickness last year....\$104.94

Of those answering, 91.9 percent thought the family doctor kept at least reasonably up-to-date; 82.4 percent could get a nurse within 12 hours; 55.2 percent always went to the nearest doctor and 12.6 percent never did so; and 95.7 percent called a doctor when the last baby was born.

A study of these figures should prove instructive. Full details appear in the *A.M.A. Bulletin* for June, 1929.

Suprarenal Extracts in Addison's Disease

Addison's disease is generally believed to be due to disturbance of the secretion of the suprarenal glands. In *J.A.M.A.*, May 11, 1929, Drs. J. M. Rogoff and G. N. Stewart, of Cleveland, conclude from their studies that the disease results from interference with the function of the cortex rather than the medulla of the glands.

Experimentally the authors found that, in the case of animals deprived of their suprarenals, while the administration of epinephrin has little or no beneficial effect, life could be prolonged and symptoms ameliorated by the administration of glandular cortical extracts. The indispensable functioning of the gland is through

a hormone secreted by the cortex. This extract, which is distinct from the medullary secretion epinephrin, the authors term 'interrenalin.'

Although clinical cases of Addison's disease are rare, yet the observations which the authors have been able to make of the clinical value of interrenalin are sufficiently interesting to justify a preliminary report.

The cortical extract is administered by mouth.

Short histories of seven cases are given in which the condition was either an avowed Addison's disease or an example of less severe suprarenal cortical deficiency. In all, symptomatic improvement was observed; but as regards the question of permanent recovery the authors state that nothing can be said until a much longer period has elapsed.

The authors suggest that the cortical extracts may be applicable in many cases of clinically atypical Addison's disease, but in which cortical deficiency may exist in less severe form. Questions as to dosage, etc., still remain to be definitely settled.

Myosalvarsan

In *Urol. and Cut. Rev.*, June, 1929, Dr. F. W. Oelze, of Leipzig, Germany, writes descriptively of a new German commercial salvarsan derivative called Myosalvarsan. It is not injected into the muscles but subcutaneously.

The author states that myosalvarsan is especially suited to the treatment of latent syphilis and the symptoms of late syphilis. It is not to be recommended as a first injection in those forms of syphilis where the positions of the lesions render a further spreading of the disease easily possible. For continuation and completion treatment, in both primary and secondary syphilis, he considers myosalvarsan as entirely suitable.

The great advantages of this preparation is that it can be injected subcutaneously. The best site for injection is the anterior aspect of the middle portion of the thigh. The appropriate quantity for injection is 0.6 Gm. dissolved in 1 cc. of a 20-percent milk sugar solution. There is very little real pain and but few reactions following the injection or during the absorption of the drug. A total quantity of 6 to 8 Gm. forms a course of treatment. Injections are given weekly. Three courses are necessary for primary, sero-negative syphilis.

Iodized Rape-Seed Oil in Roentgenography

In *Ann. Surgery*, June, 1929, Dr. Chas. H. Frazier, of Philadelphia, states that iodized oils have been used by him for cerebrospinal, urologic, vascular and sinus visualization.

A mixture of four parts of iodized rape-seed oil with one part of ethyl olive oil has been employed for routine work. The specific gravity of this combination is 1.061 and ethyl olive oil is much less toxic as a diluent than olive oil when used for cerebrospinal visualization.

The iodized rape-seed oil flows freely and does not globulate; it shows no tendency to adhere to the spinal roots, which tendency in other

iodized oils has given rise to so-called false block.

The experimental studies made by the author on dogs (and those on smaller animals, coincidentally made by Dr. Geo. Raiziss, of Philadelphia) have led him to conclude that straight iodized rape-seed oil, diluted or not with ethyl olive oil, is less toxic than a solution of sodium iodide containing a similar amount of iodine. This preparation is believed to be as inert a material as it is possible to obtain for shadow-casting purposes when injected into the internal organs and it is well tolerated by all types of tissue.

Detoxication by the Liver

In *M. J. and Record*, September 5, 1928, Dr. H. Harrower, of Glendale, California, states that a substance—anabolin—can be extracted from the liver which stimulates hepatic detoxicative efficiency.

It was thought at first that anabolin had a depressor effect, but it is now known that it is not essentially a depressor remedy and that, in fact, it can both raise and reduce blood pressure. Its principal action is connected with detoxication. It may be termed the detoxicating hormone of the liver. Liver extract contains this hormone.

Clinical and experimental researches with anabolin accentuate the importance of the study of liver physiology and its reputation in clinical practice. They emphasize a growing possibility of a new form of therapeutics, whereby hepatic detoxication may be increased and the results of a breakdown in this function may be lessened. They also introduce us to another internal secretion, hormone, catalyst, or active principle with therapeutic possibilities of considerable interest. Finally, they seem to emphasize a distinctive difference between the poison, histamine, and the benign substance previously but erroneously called the "depressor liver extract."

Comparative Clinical Values of Urinary Antiseptics

In *J. Urol.*, July, 1929, Drs. B. A. Thomas and I. K. Wang, of the Graduate School of Medicine, University of Pennsylvania, present a study of the six commonly used urinary antiseptics—mercurochrome, hexylresorcinol, hexamethylenamin, methylene blue, pyridium and salol. These were studied under identical laboratory and clinical conditions to test their comparative efficiencies.

The results of the study showed that none of the compounds named can be considered as an ideal urinary antiseptic.

Mercurochrome, given in dosage of 300 mgm. three times daily, by mouth in salol coated pills, will yield about 30 percent of antiseptized urine. Objections lie in its irritation of the digestive tract.

Hexylresorcinol, administered in 25-percent concentration in olive oil, in a dosage of 0.6 Gram three times a day, has the same objections as mercurochrome, and the antiseptic value in the excreted urine is much less.

Fifteen grains (1.0 Gm.) of hexamethylenamin, three times daily, frequently causes indi-

gestion, and the excretion of bactericidal urine is a matter of great uncertainty.

The germicidal strength of methylene blue was much higher than we expected, but the dye did not, as a rule, produce sufficient concentration in the urine to be of antiseptic value.

Pyridium, administered in a dosage of 0.2 Gram three times daily, by mouth, proved to be a very weak antiseptic, and its action against *B. coli* was practically nil.

Salol, as a urinary antiseptic, has no place in urology, since the phenol content excreted in the urine never reaches a germicidal strength. It seems, however, to render the urine bland and less irritating to the inflamed urinary tract, and thereby confers a certain amount of comfort to patients. It is prone, however, in some patients, to cause gastric intolerance.

Seasickness

Seasickness may vary anywhere from a transitory inconvenience to a decidedly serious condition. In any case, since we are more and more crossing the seas, its control merits medical attention.

In *Paris Sud et Centre Amerique*, Dr. E. Pozerski, of the Pasteur Institute, suggests that the following things will reduce suffering to a minimum:

- 1.—Immobilize the abdominal viscera by wearing a rather tight bandage.
- 2.—Eat frequent, small meals.
- 3.—Fight against the autosuggestion of seasickness. Keep busy and active.
- 4.—If sickness continues, lie horizontal as near the axis of the ship as possible and think of something else.
- 5.—The taking of not more than 20 drops (1.3 cc.) of tincture of belladonna, daily, is helpful. Very small doses of barbital are also of value.

If nothing does any good, sell your yacht and buy a bicycle.

Sex Instruction for Children and Adolescents

In the *Medical Woman's Jour.*, May, 1929, Miss Martindale, official British reporter to the Paris Congress (1929) of the Medical Women's International Association, reports the views expressed by the representatives of six countries on the question of sex instruction for children and adolescents. These views are synoptically summarized as follows:

- 1.—That there should be sex instruction, although it need not necessarily, nor indeed should it, be given under that name.
- 2.—That sex information should be given to quite young children, not as something mysterious and special, but quite naturally as ordinary instruction, in a simple account of the whole of animal and human creation.
- 3.—That a carefully written textbook on "Animal and Human Life" would meet a very real demand.
- 4.—That later in school and college life, "because no amount of physiologic knowledge, however wisely imparted, can really influence sex

conduct, further instruction in ethics, and social morality should be given, to insure control of the instinctive impulses, and subordination of them to a definitely religious and ethical ideal." (A book such as "The Transmission of Life" might be useful where good teachers cannot be found to undertake the lectures.)

5.—That because parents are, in many cases, the best people to answer the child's question—and every writer agrees that truthful, non-evasive answers should always be given—they should, themselves, be educated in sex matters.

6.—That the teachers, whether they are those who are to undertake the sex instruction from the biologic, physiologic or ethical standpoint, should also have had ample opportunity of gaining that necessary information and experience which alone will enable them to deal with their subject from the best and highest point of view.

7.—Finally, several of the writers lay stress upon the mistake of giving different instruction to the girls and boys—although possibly part of the instruction is better given to segregated classes—"a single standard of knowledge being conducive to a single standard of morality."

Diabetes Inipidus Treated by Pituitrin

In *Illinois M. J.*, March, 1929, Dr. L. E. Schwarz, Chicago, reports a case of well established diabetes inipidus in a woman of 47, kept in control for 6 years by systematic intra-nasal applications of pituitrin.

The technic employed is as follows:

Moisten with 10 or 12 drops of pituitrin a flat piece of cotton the size and double the thickness of a nickel. Take it up with a nasal forceps and carry it up and backward to the anterior surface of either one of the middle turbinates, pressing the cotton gently and firmly against the turbinate and adjoining mucosa. Withdraw the applicator taking the precaution not to dislodge the moistened cotton and allow it to remain until the time decided upon for the next application when the procedure is repeated on the opposite side in the same manner. Applications are never made on both sides simultaneously.

Under ordinary circumstances, the patient is comfortable with two applications daily, one at 8 A. M. and one at 8 P. M.; but three applications are better. Apparently toleration to the drug is not established.

Estimating the 24-Hour Volume from A Single Specimen of Urine

It is frequently desirable to know the 24-hour excretion of certain urinary solids without delay, and even if only a fractional specimen of urine is available, such estimations can be made with reasonable accuracy, according to a method reported by Henry J. Goeckel, Crawford, N. J., in *Journ. Am. Pharmaceutical Assn.* for June, 1929.

This method for estimating the total volume is based upon the fact that the 24-hour excretion of urinary pigment is relatively constant, and the technic is as follows:

Several specimens of urine whose specific grav-

ity and urea content are approximately normal (sp. g., 1020 and urea, 2 percent, in New Jersey—these figures can readily be determined for any other locality) are mixed, and 100 cc. of this mixture are compared, in colorimetric tubes, with 100 cc. of the specimen under examination.

If the standard is darker than the specimen, it is diluted with distilled water until the two match, and the amount of water added is determined by careful measurement. This number is then multiplied by 12 and the product added to 1200, which gives the probable volume, in cubic centimeters, of the total 24-hour specimen.

Example: Standard, when diluted to 122 cc., matched specimen; hence, 22 cc. of water were added; 22×12 gives 264 cc., plus 1200 gives 1464 cc., as probable 24-hour volume of specimen.

If the tested specimen is darker than the standard, dilute it and measure the water, as before, and work out as follows:

$100/y:100::X:1200$ ($y=100$ plus the number of cc. of water added—say 22, as before; X =volume sought).

Then $100/122:100::X:1200$, or $X=983.6$ cc., which is the probable 24-hour volume of this specimen.

Any standard type of colorimeter can be used for matching the specimens, if the analyst is familiar with its technic.

Acriflavine in Undulant Fever

Undulant fever is becoming much more frequently observed in the United States, but its treatment is still empiric.

In *J.A.M.A.*, June 29, 1929, Dr. A. M. Hoffman, Los Angeles, refers to the good results, reported by others in the literature, from treatment by intravenous injections of acriflavine. He reports two personal cases in which the duration of the disease was remarkably shortened by this therapy. The dosage was 0.1 Gm., intravenously the first day; 2 days later 0.25 Gm. was given; 3 days later 0.4 Gm. was administered.

The author states that acriflavine, if given properly, can do no harm and that, in the dosage attempted, it did abort what apparently would have been prolonged sieges of undulant fever.

The Abdomen and Heart Disease

In *M. J. and Record*, June 5, 1929, Dr. S. L. Immerman, of Philadelphia, expresses the opinion that indigestion may give rise to distress in the lower chest or about the precordial region. In some gall-bladder attacks, the pain is predominantly in the chest; if accompanied by shock, sweating, rapid pulse or faintness, there may be

a resemblance to coronary disease. In addition to this, gall-bladder disease may give rise to a type of heart disease. Possibly the nervous and circulatory mechanism is causal.

Inversely, heart disease may give rise to indigestion or to pain in the abdomen.

From a clinical viewpoint, angina pectoris, coronary thrombosis, aortitis, chronic myocarditis, valvular diseases and pericarditis may be associated with abdominal distress.

These opinions are supported by a number of cited clinical cases.

The Seventh Sense in Aviation

In *Mil. Surg.*, July, 1929, Commander W. L. Mann, M. C., U. S. Navy, writes on the seventh sense in aviation; namely, the sense of balance equilibrium, sense of position and motion, also called, in technical language, the vestibular or the kinetic-static sense.

Man obtains his information of the external world from the special senses: sight, hearing, taste, smell, touch, muscle sense, equilibrium sense.

The aviator's senses are: sight, muscle sense, sense of equilibrium.

In man, the seventh sense has fallen into disuse since the days of our arboreal ancestors, yet there are indications to show that experienced aviators have developed this faculty to a higher degree than have non-fliers.

Each sense has what is called "end organs" or special places on the body to receive impressions. The end organ of equilibrium—located, with the end organ of hearing, in the inner ear—is called the vestibular apparatus. This vestibular apparatus is filled with fluid, which quivers responsive to every movement of the airship and keeps the aviator constantly informed of his position in space.

It is not improbable that a large percentage of airplane accidents are due to lack of acuity or temporary impairment of the musculo-vestibular sense, hence the importance of tests for the early recognition and detection of such conditions in aviators.

Among the many causes of an impairment of the vestibular sense are: pressure of plug of wax in the ear; occlusion of the eustachian tube; toxemias of syphilis, mumps, alcohol; focal infections; etc.

An aviator with his vision temporarily obscured, when suffering from an impaired vestibular sense, may fall and, before this is corrected, crash.

The Barany chair tests, used officially for testing the vestibular apparatus, should be supplemented by other tests, especially by the Ruggles orientator.

NEW BOOKS

McDonagh: Nature of Disease

THE NATURE OF DISEASE. By J. E. R. McDonagh, F.R.C.S., Surgeon, London Lock Hospitals; Late Hunterian Professor, Royal College of Surgeons. In two volumes. London: William Heinemann, Ltd. 1924. Price, Vol. 1, £3-3-0; Vol. 2, £1-1-0.

The researches embodied in these two volumes have extended over a considerable number of years, and were initiated by the author's dissatisfaction with the generally accepted idea of the etiology of syphilis. Dr. McDonagh is now convinced that the *Spirocheta pallida* is merely the adult, male form of a protozoon allied to the *Leishmania* and having a complicated, bisexual life-cycle, which he calls *Leucocytozoon syphilitidis*, and that the spore formed after conjugation is the actual cause of the disease. This, he feels, explains the long incubation period and the fact that relapses may occur, in the absence of demonstrable spirochetes.

But this is only a minor offshoot to the revolutionary thesis advanced; namely, that there is, in reality, only one disease—electro-chemical disequilibrium—which may manifest itself in dehydration, gelation, gelato-hydration or hydration of the colloid protein particles in the blood plasma. The host's general protective mechanisms reside in these plasma particles, and local resistance in similar colloid protein particles in the lymphocytes and plasma cells; the manifestations of disease being determined by the relationship between the chemico-physical properties of the parasite and the host's protective mechanism.

These protein particles carry charges of negative or positive electricity, changes in which determine many or all of their reactions. Gram-positive and Gram-negative organisms are so by reason of their varying electric charges. The mysterious alleged substance called "complement" is merely the normal electrification of the protein particles. Ehrlich's and Metchnikoff's theories of immunity are no longer tenable, as these electric reactions explain the whole mechanism of the body's resistance to disease and of such phenomena as the Wassermann test.

The activities of the protein particles in the blood plasma are studied under the ultramicroscope, by reflected light (as in the "dark-field" examination for spirochetes), and it is found that results produced by drugs are similar to those generated by pathogenic microorganisms. Drugs can be classified as: (1) conductors of electricity; (2) condensers of electricity; and (3) ions—either acid or basic.

Inflammation and malignant disease are two stages in the same process, with Hodgkin's disease, *Mycosis fungoides* and other semi-malignant lymphocytomas standing midway. Inflammation

is a process of dehydration or lysis; and malignant disease results from excessive hydration. Chemotherapy has no specific effect upon invading microorganisms, but a general effect upon the host's protective substance.

These are a few of the startling statements which are made, in these volumes, in a dogmatic manner and without any apparent attempt to explain or elucidate. The work is obviously the result of profound study, but, while the author declares his intention of giving help to general practitioners, the manner in which the material is presented is so abstruse and ponderous that even a trained student finds the greatest difficulty in understanding what it is all about. One paragraph in the general introduction occupies two and one-half large pages, and is not particularly exceptional.

The first volume or Part is the basic portion of the work, and subsequent investigations will be embodied in additional parts, like the present Part II.

Part I is profusely embellished with color plates and drawings, made from microscopic preparations, and with photomicrographs, as well as a number of plates showing the appearances of the colloid particles as seen with the ultramicroscope, under varying conditions.

Part II contains a circular chart presenting the nature and treatment of disease graphically, and is occupied with the specific application of Dr. McDonagh's theories to particular conditions. Many case reports are included.

This is either an epoch-making contribution to the science of Medicine or the misdirected effort of a wonderful intellect, and a decision between these alternatives must await the result of the clinical application of these ideas by a number of competent and reliable observers.

Meantime, no general medical library can afford to be without these volumes; but their use by the rank and file of practicing physicians must await their translation into language which will be understandable by ordinary educated men.

Solomons: Tweedy's Obstetrics

TWEEDY'S PRACTICAL OBSTETRICS. Edited and Largely Re-Written by Bethel Solomons, M.D., F.R.C.P., M.R.I.A., Master, Rotunda Hospital; Sometime Gynecologist, Mercer's Hospital, Dublin; Consulting Gynecologist, Aut-Even Hospital, Kilkenny; Etc. Sixth Edition. New York: Oxford University Press. 1929. Price \$7.50.

The Rotunda Hospital, Dublin, has been famous for many generations as a center of obstetrical teaching. The textbook of obstetrics of Professor Tweedy, as embodying the precepts of the Rotunda Hospital School has earned a well

merited recognition and acceptance throughout the world as an authoritative exposition of the teachings of that school. In this sixth edition the work of revision, and rewriting where necessary, has been sponsored by Dr. B. Solomons, Master of the Rotunda, Dr. Tweedy having been incapacitated by failing eyesight.

This book may be looked upon as a practical, up-to-date manual which represents the present-day approved teaching and practice of obstetrics from the British viewpoint. The American practitioner will, on the whole, judge the methods recommended to be more conservative than in American practice, and that, in many cases where we would feel justified in resorting to manipulations, the patient is allowed to deliver herself. However, although Dr. Solomons presents the Rotunda practice as the main consideration, other opinions are mentioned and discussed.

In this new addition the main features of interest are the additions to the book on the subjects of toxemia and eclamptic and pre-eclamptic states. The chapter on uterine inertia has been completely rewritten and the disproportionate (contracted) pelvis discussed fully. A short new chapter on antenatal care has been added and several of the older chapters have been amplified or amended to suit changed opinions based on experience.

Many of the illustrations will compare rather unfavorably with those of the better class American textbooks. They are perhaps more practical than artistic.

It is superfluous to recommend a work which has already been judged and assigned its place in literature. Suffice it to say that Tweedy's obstetrics should be on every obstetrician's bookshelf.

Bourne and Stone: Clinical Pathology

THE PRINCIPLES OF CLINICAL PATHOLOGY IN PRACTICE. *A Guide to the Interpretation of Laboratory Investigations for the Use of Those Engaged in the Practice of Medicine.* By Geoffrey Bourne, M.D. (Lond.), M.R.C.P., Casualty Physician, Demonstrator of Practical Medicine, and Chief Assistant to the Cardiographic Department, St. Bartholomew's Hospital; etc.; and Kenneth Stone, M.D. (Oxon.), M.R.C.P., Late Senior Demonstrator of Pathology, St. Bartholomew's Hospital. London and New York: Humphrey Milford, Oxford University Press. 1929. Price \$4.75.

We are constantly hearing that too much reliance is being placed on laboratory tests. Yet, on the other hand, it is well known that ordinary clinical symptoms are very often quite deceptive and are pathognomonic only in exceptional cases; the presence of a definite disease condition must stamp its hall-mark if a suitable test can elicit it. Laboratory tests, therefore, when reliable, offer, in the majority of cases, a more scientific exposition of clinical pathology than do symptoms.

The present work is an attempt to collect what are accepted as the most constant clinical pathologic findings in disease; to state when the result of a given test, whether positive or negative, is of value; and to record when such a test is worth doing and when it is incapable of giving

help. This is to say that laboratory tests, when accepted as reliable, reduce clinical guessing to an accurate diagnosis; but when not definitely pathognomonic, still leave the diagnosis a guess. Unfortunately, in practice, few pathologic conditions are clear-cut and definite.

Although there are several quite reliable books on diagnostic tests, the particular value of this one is that it attempts to discriminate regarding the diagnostic importance of any laboratory investigation so that a physician can judge whether the result is likely to be of any clinical value to him. Of course, this applies to such investigations as he may himself make. In the light of the present progress of medical science, no physician can conscientiously refuse to avail himself of the knowledge gained from scientific diagnostic procedures and to give his patient the benefit of such knowledge. It is only by so doing that true medicine can rise above quackery and cultism.

* This book is recommended to physicians because it has been specially written for them, rather than for laboratory workers. In many cases one would have liked the authors to have been a little more full in their presentations, but, in dealing with a multiplicity of matters, no doubt conciseness is cultivated as a necessity.

Meagher: Masturbation and the Psychosexual Life

A STUDY OF MASTURBATION AND THE PSYCHOSEXUAL LIFE. By John F. W. Meagher, M.D., F.A.C.P., Neurologist to St. Mary's Hospital, Brooklyn; Neurologist to the Mary Immaculate Hospital, Jamaica; etc. Second Edition. New York: William Wood and Company. 1929. Price \$2.00.

The author believes that the habit of masturbation is almost universal in early life. In adulthood it is more common in women than in men.

The harm resulting from excessive indulgence in masturbation is chiefly in the mental and moral spheres, rather than in the physical. The author considers that the problem of treatment is more a sympathetic than an antagonistic attitude; the condition is psychopathologic rather than medical or surgical.

This little monograph will be of more interest to the psychiatrist than to the general practitioner; but the latter should be familiar with the various aspects of this widespread habit and the newer ideas of sound thinkers regarding it.

Fortune: Love and Marriage

THE ESOTERIC PHILOSOPHY OF LOVE AND MARRIAGE. By Dion Fortune, Author of "The Secrets of Dr. Travenner." London: Wm. Rider and Son, Ltd., 8 Paternoster Row, E. C. 4 1924. Price, 3s.6d.

Love is now generally recognized to be more than sex desire, but few there be who understand anything about the mechanism of this emotion on the higher planes of consciousness.

In this little volume, the author begins with a statement of the esoteric teachings regarding the nature and constitution of man, especially as regards the physical, emotional and mental planes,

and proceeds to the consideration of the esoteric concepts of sex as a manifestation of the polarity which exists in all realms of nature.

On this foundation he builds an interesting and valuable presentation of the ideal marriage, the laws of mating on each plane, the nature of ties between souls, the esoteric teachings regarding marriage, children, contraception and various other matters of great import to thinking persons.

A book of this sort widens one's outlook on the nature of human relations—a field in which the physician cannot be too well informed—and is almost indispensable to all who handle patients with psychic or mental infirmities. It may also be recommended to some people whose domestic relations are threatened with shipwreck.

An unusual book, well worth the time and attention of any thinker.

Lectures on Gastro-Intestinal Diseases

GASTRO-INTESTINAL DISEASES. *Lectures Delivered at The James Mackenzie Institute for Clinical Research, St. Andrews Winter Session, 1927. Edited by Professor David Waterston, M.A., M.D., F.R.C.S. (Edin.), Bute Professor of Anatomy, University of St. Andrews. London and New York: Humphrey Milford, Oxford University Press. 1928. Price \$3.25*

This book is formed from eleven lectures on various aspects of gastro-intestinal diseases, delivered at the James Mackenzie Institute for Clinical Research, St. Andrews University, Scotland.

These lectures fairly well cover all the phases of gastrointestinal derangements, from the simple dyspepsia to malignant disease; and, while each is an independent contribution, together they form a series, written by physicians and surgeons occupying foremost places in the profession, which, when read together, give an adequate idea of the pathology of this important region. Diagnosis and treatment are of course included and it is well to know the viewpoints of others besides ourselves on these matters.

Jones & Lovett: Orthopedic Surgery

ORTHOPEDIC SURGERY. By Sir Robert Jones, Bart., K.B.E., C.B., Ch.M. (Liverpool), F.R.C.S., (Eng., Scot. and Edin.), F.A.C.S. (U. S. A.), Emeritus President, British Orthopedic Association, Director of Orthopedic Surgery, St. Thomas's Hospital, London; etc.; and Robert W. Lovett, M.D., F.A.C.S., Late Professor of Orthopedic Surgery in Harvard University; etc. Second Edition Revised. With the Collaboration of Nathaniel Allison, M.D., F.A.C.S., Frank R. Ober, M.D., and Harry Platt, M.D., M.S., F.R.C.S. (Eng.) New York: William Wood and Company. 1929. Price \$11.00.

Sir Robert Jones has long been accepted as the dean of English orthopedic surgeons, and the late Dr. R. W. Lovett, professor of orthopedic surgery at Harvard, occupied a leading position among orthopedists in the United States. This book may, therefore, be considered as a fairly representative exposition of Anglo-American orthopedic surgery in the wide, present-day acceptance of the term.

In a general way one is rather inclined to get the idea that a greater relative importance is given to manipulative procedures than to purely surgical corrective ones. No doubt the experience of the authors has led them to this view in many cases and we are willing to accept the conclusion as sound. The results of corrective surgery of congenital and acquired deformities are not too brilliant.

There are 35 chapters. Of these the first two are general; the following chapters deal with particular diseases in regional distribution throughout the upper and lower limbs.

The authors state that in this work it was their intention to give the practitioner and medical student a plain and practical account of those pathologic conditions which they believe may properly be classified under the unsatisfactory name of orthopedic surgery. So far as this is concerned, the book may be taken as well fulfilling its purpose; but it seems to us that the practitioner will find it rather deficient in those precise details of treatment which he will particularly want to know. Most practitioners can instantly recognize a traumatic dislocation of the hip or clavicle or the sequelae of infectious poliomyelitis, but they do not know every step in the reparative processes. This is not intended as a criticism, because it is fully understood that, dealing with such a large number of conditions in a single volume, it would be quite impossible to devote all the space necessary to minor details of treatment. It is referred to so that our readers may know the limits of the book.

So far as they go, as might be expected from the reputation of the authors, the treatments are excellent and well described. Tuberculosis of the spine and joints is well handled. Perhaps a little too great prominence is given to the methods of the Boston School of Orthopedics, and in the treatment of ankylosis we notice that, while the work of Putti, of Bologna, is given in some detail, the contributions of McAusland and Campbell, in our own country, are ignored.

As a descriptive textbook of orthopedic lesions and as an exposition of accepted manipulative measures for their correction, including surgical methods to a limited degree, this volume may be recommended to all practitioners.

In this second edition many of the chapters have been revised and extended. The late Dr. Lovett has been replaced by Dr. Nathaniel Allison, the present professor of orthopedic surgery at Harvard, as co-author.

The references cited as footnotes are generally old and we are aware of many important contributions in quite recent years that appear to have escaped observation in the revisions. Moreover the references in many cases are incomplete. The book is excellently printed and amply illustrated.

Oliver: Fear

FEAR. The Autobiography of James Edwards. By John Rathbone Oliver, A. B. (Harvard), M.D. (Innsbruck). New York: The Macmillan Company. 1929. Price \$2.50.

One hardly knows how to classify this book—whether as a story or a case report. In any case, it is interesting and worth, to any physician, the time spent in reading it.

Here is set forth very vividly the way in which fear may come into the life of the child or the man, and what it does to him when it enters.

The second part, which occupies about four-fifths of the book, is written in the first person and describes the patient's experiences at a great clinic and the treatment adopted to rid him of his rather severe psychasthenia. As a picture of functional nervous disease—a fear neurosis, with obsessions—it has rarely been surpassed.

It seems doubtful that this will be a good book for laymen to read—the descriptions of symptoms are too vivid and detailed—though the decidedly sentimental ending seems to be addressed to a lay audience. But any general practitioner who reads this story will have a clearer understanding of what fear can do to man, and a deeper appreciation of the sufferings of a neurotic patient, which can scarcely fail to improve the management of these difficult and distressing cases.

Goepp: State Board Questions

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M.D., Formerly Professor of Clinical Medicine in the Graduate School of Medicine, University of Pennsylvania; etc. Sixth Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. 1929. Price \$6.00.

This useful compend of questions set by various Medical State Board examiners and the answers thereto has now reached its twenty-first year, in which period there have been several editions. The present (sixth) edition has been thoroughly revised to keep pace with new acquisitions in knowledge, as reflected in the questions set in recent years.

The sections include physics and chemistry as well as those devoted to medical and surgical subjects proper, and there is an excellent index. The book should be very valuable as a "refresher" to those preparing for examination, as well as to teachers and schools.

Stekel: Sadism and Masochism

SADISM AND MASOCHISM. *The Psychology of Hatred and Cruelty.* By Wilhelm Stekel, M. D. Authorized English Version by Louise Brink, Ph.D. In Two Volumes. New York: Horace Liveright. 1929. Price \$10.00. (Sale is strictly limited to members of the medical profession, psychoanalysts, scholars and to such adults who may have a definite position in the field of psychologic or social research).

The paraphilias, sadism and masochism, have far more than a sexual—more, even, than a psychiatric—bearing, for they enter into criminology, especially where it deals with offenses involving unusual cruelty, to a tremendous extent.

In this, as in the author's other books, he has first laid a broad and deep foundation of basic information, and then built upon it carefully and extensively.

The basic chapters, in the first volume, deal with: Polyphony of Thought; Psychology of Hatred and Cruelty; Theory of Resistance; Definitions; Relation of Sadomasochism to Homo-

sexuality; Sadomasochism and Infantilism; Sodomy and Sadism; and Compassion. The rest of the first and most of the second consist of elaborate case histories.

This is in reality an exceptionally complete and instructive clinic in the psychosexual abnormalities with which it deals. The histories are very full and detailed, and the author's discussions of them are illuminating.

Since psychic variations and paraphilias play a large part in the various neuroses, psycho-neuroses and psychoses, it behooves all general practitioners to have some knowledge of these subjects, and these volumes are a mine of information. They are almost indispensable to psychiatrists, criminologists and educators.

Von Economo: Cerebral Cortex

THE CYTOARCHITECTONICS OF THE HUMAN CEREBRAL CORTEX. By Constantin von Economo, Professor of Neurology and Psychiatry, University of Vienna. Translated by Dr. S. Parker. London and New York: Humphrey Milford, Oxford University Press. 1929. Price \$6.25.

This book is a synopsis with additions, embracing the principal features of the author's voluminous treatise, written in German and published in 1925, on the cytoarchitectonics of the human cerebral cortex. While distinctly a specialistic work, intended for the neuro-histologist, the findings of the author will interest the psychologist, the biologist and in fact all students of medicine in the broad sense, who delight in the scientific discovery and exposition of facts connected with that most baffling subject—the association of sensory and psychic phenomena with anatomic structures.

Only a few of Professor Economo's findings can be touched upon. First, it has been generally known that Rolando's fissure divides the brain into an anterior motor and a posterior sensory section. Economo's work shows clearly, in addition, that this functional separation is accompanied by a distinct anatomic difference in cell structure. The entire cortex, anterior to Rolando's fissure, shows a striking development of large pyramidal cells, with frequently entire absence of granule laminae. The caudal portion is exactly the opposite.

Again, one of the distinct characteristics of the human cerebral cortex, compared with that of other vertebrates, is the presence of the speech center: i.e., Broca's center. There are, however, according to Economo, other differentiated cortical fields for the execution of intensified psychic activity and the learned writer hints, without positively asserting, that the human brain has of itself the power of developing other such centers—new cerebral organs or focal points of intelligence with a corresponding psychic extension. In fact he generalizes and states that all individual animal families possess the same power of progressive cerebration and that this may be proved by the study of their ancestors and comparison of the brains of prototypes with present types. This is a matter which biologists and students of evolution should find of supreme interest, and it opens up a fascinating but tantalizing field for speculative thought in regard to progressive cerebration in man. The point whether the

natural law of progressive cerebration is the development of a quality inherent in the germ plasm or whether it is the result of natural selection, following upon the struggle for existence; is one that is left open, as not within the scope of the book.

Another point of interest is the consideration of the cerebrum itself as a sense organ whose specific energy is consciousness, and which does not receive its sensations directly from the outer world, but indirectly through the lower central nervous system. The reader is, however, left in the baffling position that he can no more explain consciousness than he can explain the nature of the sensation of light or any other sensation.

Of course it is to be understood that Professor Economo's conclusions or conceptions are based upon the peculiarities of cortical structures, the histologic details of which are profusely illustrated.

There are many other features of supreme interest in this book such as for instance the anatomic cerebral cortical cellular changes associated with nervous and psychic pathology. These must be left to the reader.

This is not a book for light reading. It is not a book for the practical man. It is one for quiet study and the exercise of mentality of a high order. But the intellectual pleasure which follows the understanding of the writer's reasoning and deductions is somewhat akin to that felt on the successful solution of an abstruse problem in the differential calculus.

Powell: The Soul Body

THE CAUSAL BODY AND THE EGO. By Lieut.-Colonel Arthur E. Powell. London: The Theosophical Publishing House, Ltd. (through the Theosophical Press, Wheaton, Ill.) 1928. Price \$4.25.

Paul of Tarsus may not now be recognized as a scientific authority, but it is rather generally conceded that his knowledge and wisdom were exceptional, in his day, and evidence is accumulating to show that he was right when he said, "There is a natural body and there is a spiritual body."

Assuming that there is a definite vehicle of consciousness—a body, if you please—in which the ego functions when released from its physical, emotional and mental vehicles of expression and in which the experiences of various physical lives are stored up, to appear later as "character," it would seem highly desirable to study the anatomy and physiology of that body, so that one may learn how to use it effectively. Information for the purpose of such study is contained in this volume, which is the fourth and last of the author's books dealing with the constitution of man.

As this body transcends the personality, the field of consideration must be greatly enlarged, so Col. Powell begins with a statement of the way in which a universe is formed and of the mechanism of evolution.

As the causal body (sometimes called the human soul) comes into being at the time when the ego becomes human, the process of individualization is of immense importance and is

fully discussed. Following which, the functions of the causal body and the development of faculties are considered in detail, as well as the relations between the ego and the personality.

After setting forth the method of appearance and the ordinary activities of the causal body, the next step is to outline the methods by which that body may be developed and perfected, and this is done. The ways in which the ministrations of the Christian Church and the ceremonials of Freemasonry can assist in this process are explained, and the higher initiations, by which man rises into the superhuman evolution, are described.

Throughout the book, instructive and helpful diagrams are used freely to clarify the text which, while rather abstruse, is perfectly comprehensible to anyone sufficiently interested to give it his undivided attention.

This book and the three which preceded it constitute an invaluable library dealing with the structure and functions of man, and no sincere student of metaphysics and occultism can afford to be without them.

Gunn: Pharmacology and Therapeutics

AN INTRODUCTION TO PHARMACOLOGY AND THERAPEUTICS. By J. A. Gunn, M.D., D.Sc. (Edin.); M.A. (Oxon.); Professor of Pharmacology in the University of Oxford and Fellow of Balliol College; etc. London and New York: Humphrey Milford, Oxford University Press. 1929. Price \$1.50.

This is a simply and pleasantly written introduction to the study of pharmacology and therapeutics. It has been intended by the author to supplement students' lecture notes and to supply some details not found in textbooks. There are 20 chapters in which the action of drugs on the different organic systems and regions is discussed.

Outline of Preventive Medicine

OUTLINE OF PREVENTIVE MEDICINE FOR MEDICAL PRACTITIONERS AND STUDENTS. Prepared Under the Auspices of The Committee on Public Health Relations, New York Academy of Medicine. 21 Contributors. Editorial Committee: Frederic E. Sondern, Chas. Gordon Heyd, and E. H. L. Corwin. New York: Paul B. Hoeber, Inc. 1929. Price \$5.00.

The trend of public opinion and, to a large extent, of professional medical opinion, within recent years, verges to the view that an increasing part in the future practice of medicine will be of a prophylactic nature, looking to prevention of disease rather than to its cure.

This "Outline of Preventive Medicine," which has been prepared by a committee on public health relations appointed by the New York Academy of Medicine, is intended to provide a working manual for practitioners engaging in this class of work, as part of their general practice.

The main idea embodied in the book is the periodic health examination. The average general practitioner cannot be expected to undertake, single handed, the rather comprehensive task of

a complete and efficient health examination. This work, therefore, has been planned to give the salient points coming within the purview of different specialists in making an examination within their own specialty.

There are 21 contributing specialists and the general practitioner, armed with the knowledge here placed at his disposal, plus the special information which he alone possesses from the history, both personal and familial, of his patients, will be thoroughly and in fact uniquely qualified to make periodic health examinations and to keep his patients "fit."

To ignore the trends of public opinion is foolish, especially when they are rational. Physicians must be in the van of all betterment movements and be prepared to lead, not follow, them. A book of this type, a textbook of the newer practice of medicine, or at least of one of the main paths in such practice, will be of great assistance to the profession, not alone as a guide in making periodic examinations, but also as a manual of general prophylaxis and personal hygiene.

Page and Bristow: Fractures

THE TREATMENT OF FRACTURES AND DISLOCATIONS IN GENERAL PRACTICE. By C. Max, Page, D.S.O., M.S. (Lond.), F.R.C.S., Surgeon to St. Thomas's Hospital, etc.; and W. Rowley Bristow, M.B., B.S. (Lond.), F.R.C.S., Surgeon to the Orthopedic Department, St. Thomas's Hospital, etc. Third Edition. London and New York: Humphrey Milford, Oxford University Press. Price \$4.25.

This is a handy book for the general practitioner. It is not intended by the authors as a complete treatise on the subject, but as a practical book in which the approved methods of handling the commoner fractures, especially those of the upper and lower extremities, are indicated.

Of the 15 chapters, 7 are devoted to general considerations, 7 deal with regional fractures, and a chapter on dislocations has been added to this new edition.

The illustrations are profuse and practical.

Cherry: Gynecologic Technic

SURGICAL AND MEDICAL GYNECOLOGIC TECHNIC. By Thomas A. Cherry, M. D., F.A.C.S., Professor of Gynecology, New York Post-Graduate Medical School and Hospital; Director of Gynecology, Pan-American Hospital, New York City; etc. Illustrated. Philadelphia: F. A. Davis Company. 1929. Price \$8.00.

We judge this book to be valuable to the medical profession—both internists and surgeons—for several reasons. First, it represents 15 years' work by a practical teacher of the subject; second it gives one clear, definite methods, of dealing medically or surgically with each of the important, definitely recognized lesions of the female abdominal organs; third, a uniform style is adopted by the author of dividing the treatment into definite steps, so that it is easily followed; fourth, all steps that are important are elucidated by practical illustrations.

The work is intended for experienced prac-

tioners of medicine, not for students, and unnecessary introductory matters regarding physiology, diagnosis etc., are largely omitted; it aims to offer a standard method of dealing with the common gynecologic conditions likely to be met in everyday practice. It is not an exhaustive treatise on gynecology, but it gives a tangible, practical method of handling a gynecologic condition.

The author asks that his crude drawings be not criticized severely. Such criticism as is suggested can only be complimentary, because these drawings, made by the author himself, really seem to do what an illustration should do—show to the visual sense what the author means. The typography is clear and legible.

There is room for a book like this and it will be welcomed by the profession, especially general practitioners.

Cope: Principles of Minor Surgery

SOME PRINCIPLES OF MINOR SURGERY. By Zachary Cope, M.S., M.D. (Lond.), F.R.C.S. (Eng.); Surgeon to St. Mary's Hospital, Paddington, and to the Brompton Hospital. London and New York: Humphrey Milford, Oxford University Press. 1929. Price \$3.50.

In this little book the author has attempted to lay stress upon certain elementary general principles which are sometimes in danger of neglect. It is meant chiefly for post-graduates who will be able to appreciate where the more orthodox views are departed from.

No attempt is made to deal with minor surgery as a whole, but the technic of a number of minor operations is given, including, especially, those of common occurrence.

Hess: Rickets, Osteomalacia and Tetany

RICKETS, INCLUDING OSTEOMALACIA AND TETANY. By Alfred F. Hess, M.D., Clinical Professor of Pediatrics, University and Bellevue Hospital Medical College, New York City. Illustrated. Philadelphia. Lea & Febiger. 1929. Price \$5.50.

There have been, within recent years, such immense strides in the knowledge of rickets, osteomalacia and tetany that it is important to have a new book covering these subjects. The work which Dr. Hess has done in advancing our knowledge of these disorders has made him the proper authority from whom such a presentation should come.

The book is divided into fifteen chapters, covering the following subjects: The geographical distribution of rickets, experimental rickets, the etiology of rickets, the pathogenesis of rickets, metabolism, the pathology of rickets, the symptomatology of rickets, the radiographic signs of rickets, the diagnosis and differential diagnosis of rickets, the prognosis of rickets, late or juvenile rickets, osteomalacia, infantile tetany (spasmodophilia), and the treatment of rickets.

It contains 411 pages of subject matter and a comprehensive bibliography of 38 pages.

The chapter which deals with the treatment of rickets is timely; it explains the comparative results to be obtained from the use of cod-liver oil, irradiation of the patient, and the use of irradiated ergosterol (viosterol).

F. J. H.

Clark: Organic Chemistry

ORGANIC CHEMISTRY. *For Students of Pharmacy and Medicine* By A. H. Clark, Ph.G., B.Sc., M.S., Professor of Chemistry, University of Illinois School of Pharmacy; etc. New York: D. Van Nostrand Company, Inc. 1929. Price \$3.50.

This book takes up the study of Organic Chemistry in the manner usually followed in textbooks. The first chapters are concerned with open chain hydrocarbons; these are followed by closed chain compounds. The third part of the book, "Synthetics and other Medicaments," is particularly interesting and covers, in the necessarily brief form, most of the important classes of organic compounds which are used in medicine.

Clark's book will serve well as a text for students of pharmacy and medicine; part III will also be found useful for reference purposes when brief descriptions of some of the more common medicinals are desired.

E. H. V.

Bookfellow Verse

A BOOKFELLOW ANTHOLOGY, 1929. By 116 authors. Chicago: The Order of Bookfellows, 1223 E. 53rd St. Price \$2.00.

Those who have seen one issue of the Bookfellow Anthology come to look for it each year. All the verse is by members of the Order.

The standard of excellence of the work has distinctly risen, this time. There are twenty-four pieces which are definitely poetry (a high average, considering), besides five others which,

while not poetry, are very clever versification.

"Mother" and "baby" verses and others on rather thin and trite subjects are fairly numerous, and while this sort of writing is highly desirable, as an emotional safety-valve for the writer, it would, as a rule, be better to keep it in the desk, along with other souvenirs.

One thing especially striking in this volume is the ease with which, in most instances, one can recognize the work of the trained and skillful verse writers. There is a certainty and directness in their output which is lacking in that of the tyro. One anathema hurled at the cigarette is almost unbelievably Victorian in tone.

Mary Brent Whiteside's "The Junkman of the World," which won the George Sterling prize last year, is almost worth the price of the volume.

No sincere student of modern American verse can afford to overlook this collection; and it should be an interesting addition to the reception-room literature of any doctor's office.

Klemperer and Klemperer: Practical Medicine

NEUE DEUTSCHE KLINIK. *Handwörterbuch der praktischen Medizin*. Herausgegeben von Prof. Dr. Georg Klemperer und Prof. Dr. Felix Klemperer, Berlin. Dritter Band, Echinokokkenkrankheit — Gelenkerkrankungen (chronische). Berlin N 24: Urban & Schwarzenberg, Friedrichstrasse 105b. 1929. Price geh. RM. 33.-, geb. RM. 40.-

Volume 3 of this encyclopedic work comprises subjects coming under the headings from "Echinokokken Krankheit" to "Gelenker-Krankungen" (Echinococcus diseases to chronic joint diseases). The matters dealt with are treated with the thoroughness and attention to detail which characterize all better-class German medical books. There are over 800 pages of text, and the volume is well bound and printed.

WHAT A SURGEON SHOULD TELL A PATIENT

A patient has a right to be told that a minor procedure, such as radium administration, involves anesthesia, hospitalization, the use of the operating room and the services of special nurses. These matters are of great importance to patients in their estimation of costs and, although such matters are not the personal concern of the surgeon, the patient expects to be told of them. The patient should not be led to believe that there will be no "operation."—HALL JOHNSON, in *Med. Economics*, June, 1929.

MEDICAL NEWS



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The President's Personal Physician

When Herbert Hoover became President of the United States, he decided to retain, as his personal physician, the man who had watched over the health of the occupants of the White House for eight years and who had accompanied him on his South American trip—**Commander Joel T. Boone**, Medical Corps, U. S. Navy.

Commander Boone, whose picture appears above, was first appointed to this responsible post by President Harding.

Medical Courses in France

The French have awakened to the advantages which would accrue to all concerned from having American graduate medical students doing work in her schools and

clinics, and a recent number of *L'Ere Nouvelle* strongly suggests the propriety of giving regular courses in English, for the benefit of those who do not know the French language.

One of the excellent results would be the Americans and Frenchmen would come to know and understand each other, and that alone would be worth the effort.

College of Physical Therapy

The eighth annual session of the American College of Physical Therapy will be held at the Hotel Sherman, Chicago, November 4 to 7, inclusive.

A new feature this year will be that half of each day will be devoted to clinics in the three sections—medicine, surgery and eye, ear, nose and throat. Emphasis will be given to the teaching of physical therapy. The technical and scientific exhibits will be well worth seeing.

These meetings are always inspiring and helpful, and as many as possible should accept the invitation which is extended to all licensed physicians and their assistants and technicians (properly sponsored).

A program and full information may be had by writing to the College at suite 716, 30 N. Michigan Ave., Chicago.

Physicians with Two Degrees

Of the 4,446 physicians who received their degrees during the year ended June 30, 1929, 66.4 percent held collegiate, as well as medical degrees.—*Science Service*.

Poison Ivy

"Leaflets three, let it be," is good advice for avoiding the misery caused by poison ivy, according to a release of the United States Department of Agriculture.

Farmers' Bulletin 1166-F prepared by the Department, gives a detailed description of the several kinds of poison ivy plants, directions for their eradication, and advice as to treatment in cases of poisoning.

The publication also includes references to poison sumac.

A copy of the Bulletin may be obtained upon request.



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School of Tropical Medicine

This very fine school of tropical medicine is located at San Juan, Porto Rico. It is connected with Columbia University, New York City, and is under the direction of Dr. R. A. Lambert.

Small Hospital for Sale

Due to the death of the physician who had conducted it, a small (20-room) private hospital, completely equipped, is for sale, in a Nebraska town of 1,500 inhabitants. The previous owner found it very profitable.

For full particulars address Mrs. Mertina E. Flippen, Stromsburg, Nebr.

Another Skyscraping Medical Center

Not content with one huge medical center, New York seems about to have another, erected and sponsored by the New York Hospital-Cornell Medical College Association. This is to be on the East River, between 68th and 70th Streets, and is intended to care for the medical needs of the upper east-side.

The main building is to be 24 stories high and, like the Presbyterian-Columbia Center, the institution will consist of a number of "institutes." It will house 1000 ward patients and several hundred private patients, as well as hundreds of nurses, resi-

dent physicians and undergraduates pursuing special studies. The cost will be immense.

One wonders whether the financial outlay on a plant like this will give the public any adequate return for the sums expended upon its building and maintenance.

School of Preventive Medicine in Japan

The department of preventive medicine, of Keio University Hospital, Yotsuga, Japan, the first institution of the kind in that country, was opened in the latter part of May, 1929.

This department was made possible by a gift of \$175,000 from the Rockefeller Foundation, of New York.

The Employment of Bacteria in Warfare

Certain accusations that plague bacilli were employed as a lethal weapon against their enemies by the Germans in the World War have been denied by high German medical authorities who were hygienic advisers to the armies in France and Belgium. These authorities state that even if such measures should have been contemplated they would have been impracticable. Explosive missiles, or culture flasks dropped from aircraft would not be effective; the letting loose of infected rats near the enemy lines would be as dangerous to themselves, if not more so, than to the enemy.—*Lancet*, April 6, 1929.

Ultraviolet Used by Art Museum to Test Marble

In a series of tests made by the Metropolitan Museum of Art, pieces of old Carrara marble were compared with freshly cut Carrara under ultraviolet light. A decided difference in color was noted.

Pieces of marble statues, some antique, some known to be modern or fraudulent, were then put to the ultraviolet test and, in every case, the rays give the same verdict that experts had reached by careful observation.

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to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

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